Lectures on the Materia Medica.

by

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Vol. II.

Particular Bitters

I have only a few remarks to make upon them, as I have been so full on ye. general Qualities of Bitters.

Lyngenerin.

It is in ye. Leaves of this ye. ye. Bitterness commonly resides. The root generally contains an aromatic resin, or if it contains a bitter it is commonly of ye. weaker kind. Those we are now treating of are ye. Amara calida. These are species of ye. same Genus; and therefore agree in Virtues. Physicians however have been chusing & disputing about ye. choice. It appears to me ye. ye. greatest virtue of these plants resides in ye. Absinth. vulgare, & in ye. Leaves of this. It contains a considerable quantity of essential oil & is therefore chiefly noted for those narcotic qualities & bad effects on ye. Eyes wch. are mentioned. It has a disagreeable & rank smell, wch. however it loses on keeping, as it resides in ye. volatile part. Dr. Lewis says ye. after distilling Wormwood for ye. simple Water, ye wch. remains in ye. Still after ye. essential oil is gone, affords a considerable impregnation to Spt. of Wine. I am doubtful whether this is a proper practice either in this case or in ye. other plants for wch. Lewis recommends it; & before we follow it, we should at least make some expts whether an impregnation of ye. kind, after ye. essential oil has been separated, contains ye. Bitter of ye. entire plant. The Root of ye. Abrynthium differs in sensible qualities from ye. herb. The ye. common Wormwood is ye. strongest of ye. class, yet there are others wch. contain a stronger Aroma. ex. Haller mentions one wch. he found in ye. Alps, & was made use of by ye. Inhabitants as a common ~~powerful~~ effectual febrifuge.

Cnicus Benedictus, contains a more pure & less of a very volatile essential oil than ye. former. It may be extracted like Wormwood, but we find ye. heat applied to it dissipates ~~a~~ a great ~~a~~ part of it, & ye. only ~~ap~~ way to obtain an agreeable bitter from it, is by macerating it in cold Water.

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Carline. It is used however in other parts of Europe & stands recommended as a sudorific & stomachic; It has also been used sometimes to expel Exanthemata.

Camomile Tea is of great service in fevers of ye intermittent & remittent kind especially if there is any gastricency joined w. them. It is also very proper to drink it in them & other disorders after a vomit; for it does not relax ye stomach so much as warm ye; & if any of it remains on ye stomach it proves of service by its diuretic & diaphoretic virtues.

The Carlina ~~ale~~ stands in our Dispensatories; but it does not enter much into our practice.

Chamomelum is more freely employed than any of ye others, & undoubtedly has almost all ye Virtues ye are in general ascribed to Bitters. It abounds in a pungent aromatic oil, it is considered as ye most active of Bitters, & before ye invention of ye Peruvian Bark, it was employed for ye same purposes as this is now. I have seen it freely tried & sometimes it proved effectual; but upon ye whole it falls greatly short of ye Bark, & when it is given in considerable quantity, it is much more apt to run off by stool & disappoint her purpose.

Cotula fœtida or wild Chamomile. Brown Langrish tells us ye a decoction of this was recommended by a Gypsy to a person under ye rheumatism; ye it threw him into a profuse sweat & cured him of ye disease. Instances of ye kind should be noted.

Santonicum. ~~Ther~~ should have spoken of this under ye same head w. Absynthium; as it is a species of ye Genus. It is ye seeds of ye plant, but these are so mixed w. ye stalks at ye same time; ye many have doubted whether there were any seeds at all w. it. I do not doubt but what it ~~has~~ possesses Virtues analogous to ye wormwood; but I do not imagine ye it has any peculiar qualities, ye should induce us to import it. It has been thought anthelmintic, & hence ye name of Worm seed; & also of ye Absinth: Wormwood. But I never found any great effects from it; even when given to Men in very large doses.

Tanacetum. It appears from Pringles Exps ye all our Bitters are Antiseptics. The Tansy has always been looked upon as ye strongest of ye kind; & it is said ye if Animal bodies be covered w. it; it will preserve them from putrefaction for a considerable ~~length of~~ time. Ye

Tansey is a very common remedy in ye Women for ye hysterics
They also put it in ye footbath in order to restore a suppressed
of ye menses. It is recommended in ye Dropsy in ye German
Philosophical transactions. The seeds are slightly employed against
Worms; I have said before ye Bitters have no peculiar Virtue
to destroy them.

has a larger proportion of Aroma w.th its bitter, than any of y.e Cap.
These ad.s contain y.e strongest bitter.
The 3 following substances are frequently employed as med.s their virtues reside in an essential oil; w.h contains y.e bitter; but in y.e former y.e oil did not contain it. They are on y.e acc.t of y.e most acrid & heating; & the bad effects we see ascribed to y.e use of bitters, appear more strongly in these than any of y.e others. ——
The Genus of Lemons is y.e most acrid of y.e three. Septalius has given us a singular proportion of y.e Orange peel. He takes y.e peel of unripe Oranges & by long decoction brings them to an Extract, w.h he employed successfully in y.e a profuse flow of y.e menses. The Aurantia Curaçavenia, Curaçao or bitter Orange. I imagine these belong to y.e same Genus as y.e Lemon & Orange; & from y.e bitterness & size I take them to be y.e unripe fruit, & therefore peculiarly adapted for y.e purposes w.h Septalius employed y.e Orange peel. They seem to be an useful addition to our Materia medica, as they contain less of an essential oil than y.e Orange & Lemon Peel; & may therefore be given w.h greater safety —— After these three we come in order to y.e
Centaurium minus & Gentian. These differ from y.e others in so far as they contain a very pure bitter w.h little essential oil. They are species of y.e same Genus. Gentian has long been known as a very pure bitter; & as it is w.h out any odour; it is more uniformly agreeable than any of y.e others. Tho it is not a root of great Value yet from y.e great demand that there is of it, it has been found adulterated w.h a poysonous plant. I believe it seldom comes adulterated to this country; but if it did, we should certainly be at a great loss to distinguish it. We should therefore think of finding out a proper

Gentian may be employed in every case where Bitters are indicated & ye. Cautions ye. we gave of Bitters in general applys to Gentian. It is an excellent stomachic, & you know ye. this & Orange peel are ye. Ingredients of wch. Stoughtons Bitters is made. The Surgeons make use of the root in fistulous ulcers, in order to keep them clean & keep ye. Lips of ye wound from closing. It, as well as ye. Cortex should be given at ℥ij for a dose; wch. may however for more convenient exhibition be divided into 4 parts, & ~~each~~ taken every 6 hours.

The Governor of Loxa in South America ~~first got ye.~~ by his persuasions & friendly offices obtained from ye. Indians of ye. part ye. ~~secret~~ remedy ~~by~~ wch. they cured ye. intermittent fevers; he afterwards in ye. year 1638 communicated to ye. Count de Chincon, whose Lady was dangerously ill. It was first brought into Europe by ye. Count de Chincon in ye. yr 1640 & relieved many of it who were dangerously ill of intermittent & remittent fevers. In ye. year 1649 a Jesuit brought a large quantity of it for ~~from~~ Peru to Rome; & hence it got ye. Name of Jesuits powder & Jesuits Bark; for ye. religious of this order were then ye. sole Vendors & Proprietors of it. They sold it at an exorbitant price; but ℥ij were then generally found sufficient for a cure. Dr. Robert Talbot introduced it again (in 1679) but kept ye. medicine a secret, & it was only known under ye. name of ye. english powder. Louis ye. 14th purchased ye. secret for 2000 Guineas & allowed Dr. Robert a pension of 100 Guineas pr. Annum, since wch. time it has been in general use

substitute for it, y. growth of our own Country. Lewis proposes y. extract of wormwood for y. purpose; but I think w. great impropriety & he would certainly have been much nearer y. matter had he proposed y. lesser Centaury, w. is not only a plant of y. same Genus, but also agrees w. it in sensible qualities, in Virtues & in appearance. If we substitute this for y. Gentian, we should take y. Leaves; for these contain y. most bitter, & this in proportion as they grow nearer to y. root. It is a great error to use y. stalks & flowering tops, as these are y. weakest. When this plant grows in a barren soil it is very small; but it is inconceivable to think how much it is improved if it is transported to a rich soil, both in growth & y. Virtue. The next in order is y. famous Peruvian Bark y. follows

This is by Linnaeus called Chincona, & this is y. only proper name for it; for it was first brought into Europe by y. Countess of Chincon, Viceroy of Peru, whose Lady had been cured of a fever by it after y. ordinary remedies had been tried to no purpose. All y. other Names as China, Quinquina &c. are corruptions of y. former. When it was first introduced into europe it was found to be an effectual cure for intermittent fevers; but whether a medicine of more efficacy was brought into practice at y. same time, or whether it was owing to a timid practice by w. y. dose was lessened or whether some other cause was y. occasion is uncertain but it was soon neglected & not made use of for 30 years, when it was again restored by Talbot. It is at present so much employed & recommended for such a variety of Diseases; y. a person might write a whole Treatise only on this plant; but I cannot enter on this subject as fully in this place, it will be sufficient if I give you its most remarkable effects & endeavour to account for its manner of Operation. The peruvian bark belongs to y. Class of Bitters, & by its bitterness it

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contains also an aromatic acrimony depending on its essential oil. Besides these qualities it also has a Septicity or Astringency, tho however has been denied by some; but in it is sufficiently evident if we extract some of its other qualities by Ascion or evolution.

All y. Virtues & Qualities y. are ascribed to Bitters in general, are also ascribed to y. Bark. It has y. same effects in y. Stomach & Intestines. I have frequently known it purge if it is given in large doses & I know several Instances of an habitual costiveness being cured by this medicine; & where it was given for this purpose by design & not by accident. An habitual costiveness often proceeds from a weakness & relaxation of y. Intestines or alimentary canal; & in these cases y. bark ~~was~~ given in doses of ℥j for several days together cured y. disease & seemed to work a considerable change in y. System.

It has not been observed y. y. Bark has any considerable diuretic or diaphoretic effects when carried into y. Blood. It is supposed to strengthen the System in general; but it is a disputed point whether this effect is owing to a specifick Virtue, or to y. proper method of giving y. Medicine. The former is ~~generally~~ alledged by y. generality of Physicians; who often attribute specifick Virtues to a Medicine when they are not able to account for y. manner of its operation. I formerly told you y. I was very averse to believe there were any Specifics; & we ought at least to endeavour to account for y. operation of a Medicine before we allow it a specifick Virtue; we shall at any rate be obliged to acknowledge in many cases y. we are unable to account for y operation of Med.

When we order y. Bark for y. cure of an Intermittent, we must give it during y. Apyrexia or during y. Intervals of y. Paroxysm; it is allowed by every practitioner y. if it is given during y. fit, it is hurtful

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It acts here by preventing ye return of ye cold fit; for it is almost universally agreed that ye cold fit is ye cause of ye disease. And therefore Boerhaave after enumerating ye order of ye symptoms tells us. Videtur in qui primum tempus & primam causam superare possit, etiam totum illum paroxysmum posse tollere. As the prevention then of Intermittents, depends on ye prevention of ye cold fit; & as the Bark therefore must act on this; we can only explain its manner of operation from ye theory or opinion we have in what manner ye paroxysm of Intermittents is formed. If it is said ye ye cold fit depends on ye accumulation of ye fluids in ye vessels on ye surface; ye bark must alter ye accumulation: if it depends on an affection of ye moving fibres ye bark obviates ye spasmodic affection. We must embrace one or other of these opinions. The last appears to me to be ye most probable. I cannot at present take up your time by entering into a full disquisition of this point, or giving all ye reasons ye induce me to assent to this opinion. As it is subject of some importance I would advise you to consult Van Swieten, Hoffman & others. I shall give you only a few hints upon this subject

The paroxysm of Intermittents appears to be an affection of ye nervous power & ye it is often obviated by animi pathemata, or ye passions of ye mind. All periodic affections may be reduced and indeed are either of ye spasmodic or periodic kind. We conclude ye neither a lentor or putrid humor may be ye cause of them, as some have alledged, because all periodic affections may become habitual. It is a rule of Celsus ye when a person is cured of an Intermittent he ought to avoid every thing wh would cause a return of ye paroxysm, but especially on those days in wh ye fit used to return. Now in this case it can

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cannot be supposed ye. ye. person who is thus liable to have a return can all this time have a putrid humor lurking in him; for he is generally in a very good state of health. It is my opinion ye. ye. bark acts by obviating ye. spasmodic affection to wh. ye. system is so liable, & accordingly we find it a remarkable remedy in all affections of ye. kind. We shall endeavour to pursue ye. Matter a little farther & see whether ye. Virtues ~~of~~ or properties of ye. Bark are not connected wh. its sensible qualities. The Bark is a bitter: & other bitters have ye. same effects. I have seen Instances, but not very often, of Bitters curing Intermittents. The reason why Bitters are not so powerful as ye. Bark may be because ye. in strongest of bitters: for bitters being joined wh. other qualities, from improper exhibition, or giving them in too small doses. Thus Chamomile flowers, wh. Pitcarne supposes equally effectual as ye. Bark, are much more liable to run off by stool; & hence if an Opiate were joined wh. them this effect might be prevented. The bark then being only a stronger bitter we must not confine ye. property of curing Intermittents to ye. bark, but extend it to all other bitters. We may also view this matter in another light. Bark by its sensible qualities appears to be an astringent, & other astringents have been used wh. success in ye. same case. e.g. Alum, Steel &c. astringents. Renaud & Nomberg found Galls to cure Intermittents in France: The royal academy at Paris ordered Lemery, Geoffroy & others of ye. Members to make tryal of them & they reported that Galls did cure intermittents; but not so generally & certain as ye. Bark. Bark then may as an astringent be only of a stronger nature than others; as there are proofs of some astringents acting in ye. same way. Besides it does not appear from ye. experiments mentioned, what really may be

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y. effects of pure astringents, for Renaud only gave y. medicine in a small dose, for in y. exhibition of astringents we are ever in fear of exceeding in quantity; & it has also been objected y. y. Bark cannot act as an astringent, for if it did we should be in danger of suppressing healthy excretions. It is possible then y. if Galls had been given in diff. quantity, they would have been effected oftner than what they have been. Others are of a diff. opinion & allow y. Astringents may cure intermittents but y. they do it but very seldom, & y. it is absolutely necessary y. bitters should be joined w. Astringents; & hence they cure in Germany hipsil or y. buckbean & tormentil successfully. As Astringents do in many cases prove antispasmodic, it is highly probable y. y. Bark acts nearly in y. same manner. I shall not however say y. it is antispasmodic in y. common acceptation of y. word; but I think we may explain its operation in this manner.

I formerly told you what I meant by y. proper Tone of y. fibre. Tonic Med. are such as give this tone to y. fibre; w. is on y. one hand opposed to rigidity, & on y. other to laxity. I think it is very evident y. this Tone, of w. some have doubted, appears in y. whole system & even in y. sanguiferous system. This tone depends on y. firmness of cohesion of y. simple solids & on y. influence of y. nervous power. The first being commonly given by Nature or in y. first formation of y. parts; it is evident y. y. Variations must depend chiefly on y. last. Nothing is more common than to see mobility depending on Atonia, as Hoffman calls it. It is by increasing y. tone of our fibres y. y. Bark seems to obviate y. return of spasmodic affections. You will find this confirmed by attending to Intermittents & y. proper exhibition of y. Bark in them.

It is very evident ye during ye paroxysm, when there are spasmodic motions, there is also a constriction on ye surface of ye body. Our tonic med. encrease ye constriction, & therefore they ought not to be given during ye fit. This constriction, especially at ye beginning of ye disease, not only remains during ye whole fit, but also during ye Intervals; & it is therefore necessary to allow ye disease to go through several paroxysms, untill by repeated sweats ye constriction is removed. This is ye foundation of ye cautions you meet wi. in practical Writers, not to give ye Bark, untill ye patient has had a few paroxysms.

A further proof ye ye constriction takes place in ye extreme Vessels, is, ye ye blood is during ye paroxysm collected or accumulated in ye viscera of ye abdomen. It is therefore imprudent to exhibit ye bark untill ye determination to ye abdominal Vessels be taken off & ye free circulation of ye blood again restored to ye surface. When ye Bark is given it should first be joined wi. purgatives to obviate ye strictures in ye prima via & ye obstructions ye often are formed there. But when these are removed we must abstain from ye use of purgatives; for otherwise we shall be disappointed in our intention; & even if ye bark wi. out any addition forces purgative, we shall not effect a cure. The reason is this: It is found ye every debilitating power applied to ye body: eg. evacuations, cooling med. &c. favour ye return of Intermittents. Hence then ye evacuations produced by ye bark itself, or by other substances joined wi. it do more than counterballance ye strengthening effects of ye bark. Sometimes however it does happen, ye ye Bark ~~the it~~ proves effectual notwithstanding it does purge. In this case it ~~seem~~ seems ye a part of it is taken into ye blood & there obviates

compensates or over-powers ye. effects of ye. purging.
Wherever there is an inflammatory diathesis in ye. System; wherever the ye. tonic power is increased, the Bark is hurtful. This vis tonica or tonic power appears in ye. blood vessels from ye. tension of ye. pulse; & on ye. acct. ye. Bark is not near so effectual in vernal as in summer & autumnal Intermittents.
On ye. contrary wherever a putrid a Diathesis is prevalent, there ye. Vis tonica is diminished below ye. proper standard, & in these cases also ye. Bark is universally useful. I am very ready to coincide wt. Dr. Pringles opinion ye. a putrescency accompanies autumnal intermittents, & ye. ye. Bark is a very powerful antiseptic. But ye. small quantity ye. is given of it; ye. less quantity ye. is extracted in ye. stomach of what is given; & ye. very little ye. can be absorbed of ye. quantity ye. is extracted, can certainly have very little power in preventing ye. putrescency of ye. fluids. Imagine ye. ye. Bark has a much greater effect & acts in these cases by restoring the tone to ye. fibres ye. have been in these cases debilitated by putrefaction; & Dr. Pringle himself enumerates other Astringents ye. have ye. same effect. Hence it is not only useful in autumnal intermittents, but in all putrid fevers & in putrid diathesis of every kind. Hence ye. Bark is advantageously employed in all remittent fevers, where ye. is an evid. remission, & in all anomalous or malignant fevers, where a putrefaction takes place. With regard to continued fevers, the Bark is also employed in these, but here ye. propriety of its exhibition is disputed, & I do not know ye. any Writer ever has ascertained at what state, stage or period of a continued fever ye. Bark should be given. What we call continued fevers are not ye. same wt. those ye. ye. Ancients called febres continentes: by wt. they

they meant each in which a hot fit followed a cold one; & this hot fit lasted y. whole course of y. disease untill it was terminated in a Crisis, y. either proved fatal or freed y. patient from his fever. There is therefore a distinction between between y. febres continentes & febres continuæ & in y. last they acknowledged y. there was an intermission or at least a remission between y. paroxysms. I never have met w. a febris continens, & I even find from y. accounts of y. Ancients that they occurred but rarely, if ever. I would therefore allege y. every fever consists of y. return of a repeated number of paroxysms. If this be really found to be y. case every paroxysm must depend on y. cold fit, & it is therefore plain y. by obviating y. return of y. spasmodic affection, y. bark may be as useful in continued as in intermittent fevers. But the difficulties of giving the bark in these fevers are much greater than in Intermittents. I told you above y. in Intermittents we could not give y. bark either during y. cold or hot fit, nor sometimes even during y. Interval unless y. constriction on y. surface was removed; how much more doubtful & uncertain must y. effects of y. bark be when it is given in these continued fevers, in w. one paroxysm often succeeds another so quickly, y. we can hardly distinguish between them. Whenever an inflammatory diathesis & energetic vis tonica are present, we must certainly avoid y. Bark; & in continued fevers it is often very difficult to ascertain y. times of accession or remission; w. is another obstacle to its use in these cases. If a distinct remission appears, we may exhibit y. Bark w. confidence & success. You will not find y. matter better illustrated by any Author than by Cleghorn in his excellent treatise on y. diseases of Minorca. He observed in those dangerous remittents w. were so common in Minorca, y. unless he gave y. Bark during y. first

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remission, his patient died. He therefore carefully watched ye times of intermission or remission & gave ye bark (wch. wch. he often succeeded when cases were deemed desperate. If you have any inclination to be perfectly acquainted wth. this subject, wch. is so important to us who live in a warm climate & where the ~~of~~ remittent putrid fevers are sometimes epidemic & extremely fatal, I would advise you to ~~look~~ consult Dr. Morton, who is a writer ye abound as much in practical facts & observations as any whatever; but who is now much neglected because he gave into theory ~~& had~~ that were ye entirely ye reverse of those wch. ye sagacious Sydenham held, whose rival & Cotemporary he was. He constantly used ye bark in continued fevers, but wth. ye cautions I just mentioned. There is however one case of continued fever where we may employ ye Bark without paying any regard to intermission or remission viz. whenever a putrid diathesis has gone any great length in ye system, or where there are evident signs of putrefaction. This is often ye case, tho the fever may appear wth. very inflammatory symptoms in ye beginning. I think the Bark may also be universally employed where there are petechia. From Pringles experience it appears ye in all cases of this kind ye bark is ye principal remedy we can trust to. De Sacha in his ratio medendi gives many instances of putrid fevers being cured by ye remedy, & many other Authors who have used ye bark in similar cases also give great encomiums to this remedy. You should besides ye Author I just quoted also carefully consult Franciscus Forti in his Therapeutica specialis & Werlhoff de febribus, in order to get a compleat idea of ye proper use of this divine remedy in fevers.

The Bark is not as freely employed in y. Dysentery as in some of y. foregoing cases; the have did not however want for ample y. evidence as of its usefulness. I consider a Dysentery as a febrile disorder, & it is known to every person y. it is either founded on or causes a putrid diathesis. This disease is often of an inflammatory nature in y. beginning & then y. bark is improper; but then inflamatory diaphoretics & continuance often grow become putrid. & in these, as well as in those y. are originally of a putrid nature, y. bark is improper. & proved an efficacious remedy. If it is given in sufficient quantity we may explain its manner of operation from its antiseptic Virtue, by wch. it corrects y. putrescency of y. fluids in y. primæ viæ; but in an advanced or chronic Dysentery it acts chiefly as an astringent. We have are in general too cautious in y. use of astringents in y. dysentery; & I think we might often put a stop to y. disease by y. judicious & well timed administration of astringents. The Dysentery may be considered if I may use Sydenhams words as a febris intestina, wch. a spasmodic constriction of y. Vessels of y. skin. The Bark in these cases is not only a more safe remedy than simple astringents, but at y. same time operates by restoring y. equilibrium to y. skin & thus restoring y. insensible perspiration. The use of y. bark in this Disease has been confirmed by diverse writers on y. subject, & among others by Dr. Wilson of Newcastle, whom you may consult on y. subject. The Bark is also employed in y. Gangrene & Mortification, & every practitioner gives testimony in its favour. It is however not also effectual in every gangrene, tho it may be properly applied. This we may explain in y. following manner: The Gangrene is of 2 kinds, y. differ in their nature as well as cause: The one arises merely from y. consequence of a violent inflamation: y. other is owing to a fluidity of y. Vessels of y. part affected or to a relaxation & atonia of y.

whole system. The first kind is known to every person & occurs often enough; y. last happens in hydropic, paralytic, or old people. The bark seems peculiarly adapted for y. last species of Gangrene; & ~~it seldom fails of curing it~~ if it is given in a proper dose it seldom fails to effect a cure by bringing on a suppurative inflamation, by w. y. mortified part is separated from y. sound. It is is not so universally serviceable in Gangrenes depending on Inflamation & y. for by reason, y. y. bark acts by giving tone to & encreasing y. strength of y. fibres & must therefore prove hurtful where these are already too much encreased by disease. In a former Lecture I told you y. some attempted to cure fevers by a stimulus, w. is they endeavour to excite such a degree of fever as to obviate y. accession of y. cold fit. It has been imagined y. Bark acts in y. same manner, but this is not y. case for y. pulse is not quickened by it or raised above its healthy standard & altho it takes off flaccidity yet it does not irritate y. heart & sanguiferous system. It is necessary that we should attend to this in accounting for y. operation of bark in producing suppouration. If suppuration is not carried on properly, y. often depends on y. flaccidity of y. part; & if it is supplied it is again brought on by applying stimulants to y. part. I think it is in y. manner y. all balsamic substances act & also Copper & Zinc viz: by exciting y. tone of y. flaccid fibres. It is in y. same way y. bark mends y. suppuration & brings on a healthy discharge from y. sore in stagnating carious & ichorous ulcers. It is not many years since it was affirmed y. y. bark would even cure Cancers, but its effects do not appear to be very considerable in these cases; & we often deceive ourselves by calling a Cancer what in reality is only a bad & foul ulcer. It does however sometimes prove of service in Cancers, & freqly in Ulcers of a bad & tedious kind. In short wherever a Suppouration is to be carried on ~~w. encreasing y. inflamm~~ where there is no Inflamation, & wherever y. Vis Vitæ

or nervous fever, viz. Bark is a very proper remedy. Here it has been attended w.th great success in y.e small pox, w.ch I consider merely as a suppurative disease, or an inflamatory fever tending & terminating in suppuration. Whenever y.e small pox is attended w.th an inflamation round y.e pustules & y.e inflamation extends to y.e rest of y.e system, y.e bark may be & certainly is hurtful, whereas at those times when a putrid diathesis is more evident, & when there is no appearance of y.e topical inflamation, it has been so remarkably useful in bringing on a suppuration. And if at any time its effects in y.e small pox are dubious, we should ascribe it to a promiscuous & improper use. From what I have said it will appear to you y.e it should generally be confined to suppurative state, & ought not in general to be given before y.e 5.th or 6.th day. I know y.e it has been used during y.e eruptive fever, but I imagine, improperly & often w.th bad consequences; for when there is a high inflamatory state over y.e whole body it must certainly do mischief. This last is a rule y.e has no exception but one y.t I know of, viz. a species of small pox in w.ch there appear hectics from y.e first beginning. It is also frequently made use of in y.e secondary fever of y.e small pox; but here its effects are doubtful. For this ~~fever~~ secondary fever is often of y.e inflamatory kind, & is much easier cured by purging & y.e antiphlogistic regimen. This is very remarkable in y.e Measles; but it also takes in y.e small pox; & I imagine y.t wherever there is an evacuation to be carried on y.e bark is inconsistent, superfluous or hurtful & only then useful when a putrid diathesis is very evident either in y.e first part of a secondary fever, or apt to occur during its continuance.

As y.e bark has been found efficacious in external ulcers & in y.e small pox, some have been led by these considerations to extend its use to internal ulcers & have prescribed it in y.e Phthisis pulmonalis. But experience has shown y.t its use is attended w.th bad effects in this

Lungs; wch. are owing to an inflamatory diathesis generally accompanying a
Consumption. Dr. Dover about 60 years ago proposed ~~a method of~~
curing consumptions by frequent & small bleedings; wch. practice has since
been followed & amongst others much recommended by Dr. Pringle. There
are Instances of consumption persons being bled as high than 50 times
in y. blood was every time covered wth. y. peculiar membrane or covering
tion wch. is generally called y. inflamatory Coat, & occurs in all fevers
attended wth. Inflamation. May there cases of Consumption are often
clearly inflamatory & scarce ever want some degree of Inflamation.
These are y. principal & leading cases for wch. y. Bark stands recom-
mended, & in which I have now endeavoured to explain its manner
of operation. There are still some special or particular diseases in wch. it
has been recommended, & into wch. we are next to enquire. It has been
employed for scrophulous cases. The Scrophula is freqly attended wth.
ulcers of a bad kind; y. depend on a flaccidity of y. vessels of y. pat
affected & often of y. ~~whole~~ System in generally so y. in cases of the latter
kind y. Bark is properly applied & therefore we see by y. History
in y. London med. essays given by Fothergill, Fordyce & Thos. Bond
that it has been successfully employed in such circumstances.
It must however be observed y. y. Bark often does not succeed in y.
disease; & even y. Gentlemen prior mentioned acknowledge y. they
could not always succeed; for I imagine y. disease is often beyond
y. power of Medicine; & it appears y. it is often a disease of y.
lymph secreted in y. lymphatic vessels & not depending so much on
a flaccidity of y. System in general as on some peculiar affection
of y. lymphatics & matter generated there. —
The Bark has been more successfully employed as a remedy for y.
harmodic affections in y. hysteric & hypochondriac diseases & in
certain kinds of Asthma; but not whose wch. such success as to have

[illegible]

acquired y. name of a specifick in these complaints. Whenever these Diseases depend on a mobility, & this on a debility, & whenever there are either y. cause or effect of y. disease, & not complicated w. obstructions, y. Bark may be employed safely & successfully. In y. hypochondriac therefore when y. Viscera are still sound & free from obstructions we may have recourse to y. Bark; but it must undoubtedly do prejudice when in y. decline of life where y. disease is properly hypochondriac & attended w. considerable obstructions & indurations of y. Viscera. On y. contrary in y. pure hysteric disease, where y. Viscera are not affected, but y. System is very irritable & easily moved by passions of y. mind or other causes, y. Bark is very proper & should always be used. — The Epilepsy often depends on a similar mobility, & in this case also y. Bark will be useful; but if the disease depends on a wrong conformation of y. Cordis or sensorium commune, we can expect but little service from y. Bark. Sr. John Floyer found y. spasmodic Asthma, when there was no obstruction in y. Lungs, could generally be relieved by y. Bark; but wherever y. Lungs were overloaded w. Phlegm or Mucus, w. was to be thrown off by expectoration, y. Bark proved hurtful.

In y. Chorea Sancti Viti, or St. Vitus's dance, or those complicated spasmodic ~~contractions~~ motions w. occur in persons of a lax moveable [redacted] constitution, y. Bark is a remedy upon w. may depend. Sydenham proposed to treat this disease w. evacuations & he indeed they may be necessary in y. beginning when there are evident signs of a repletion; but it is very seldom cured by them, & whereas there are Instances of y. Bark curing it, after Evacuations had been tried to no purpose

Dr. Harris has a
Obstructions of
case of Hæmorr
recommended to be a
tonic & for this
decoction, whenever
be employed as
of the dose from
system in general
be paid be given. I
2d. Work in a
Of
the Harris is much
In this case the
& given in weak g
not the determine
gent as y. Hæmor
probably & fl
excellent remedy
I have been a great
the hæmorrhage.
case of hæmorrhage
be ad. advantage
as become habit
probably & there
further to be
in I have out of 10
however be cause
& the right use
astringents may
distinguish these

The Bark has also been proposed for ye. cure of menstrual obstructions.
Obstructions of ye. Menses may be owing to various causes. One
case of obstruction of Menses is attended w.th a Chlorosis, & this
seems to be attended w.th all ye. symptoms of flaccidity & want of
tone; & for this reason it is commonly treated w.th Steel & chalybeat me-
dicines; wherever therefore med.s of this class are indicated, ye. Bark may
be employed w.th equal advantage. But Menstrual obstructions also
often arise from causes ye. act particularly on ye. Uterus & not on ye.
system in general; & in these cases neither ye. Bark nor Chalybeat med.s
would be given. And upon ye. whole it is not very common to prescribe
ye. Bark in a Chlorosis or obstruction of ye. Menses.
The Bark is much more commonly exhibited in ye. fluxus nimio mensium.
In this case ~~there are also~~ astringents & Chalybeates are also employed,
& given in such quantities as to bring on strong adstrictions. I shall
not here determine whether ye. Bark answers equally well for an astrin-
gent as ye. solutions of Iron. Wherever ye. fluxion depends on
Irritability & flaccidity ye. Bark joined w.th Sal Martis makes an
excellent remedy.
It has been a question whether ye. Bark may also be employed in
the hemorrhages? I think ye. true answer is ye. Negative. In those
cases of hemorrhage ye. depend on mobility & debility the Bark may
be med.d w.th advantage; & also in those which have subsisted so long
as to become habitual & periodical. But if we consider hemorrhages
properly & those ye. happen by preternatural outlets, we shall
find them to be constantly of ye. inflammatory kind. Thus Hemoptoe
in 9 cases out of 10 depends on an inflammatory diathesis. There may
however be cases of hemoptoe ye. have subsisted a ~~great~~ long time
& are kept up from ye. laxity of ye. lungs; in these ye. Bark &
adstringents may do service. It is a difficult matter always to
distinguish these, & it is nevertheless ye. certain ye. if we commit

an error here, it will be attended w.th disagreeable consequences
In y.e collection of Theriac's w.ch Dr. Fallo made & prescribed there is one
on y.e use of y.e Bark in y.e Jaundice. I shall not absolutely deny
y.e use of y.e Bark in this case; for other astringents have been
employed for y.e same purpose. We know y.t y.e Jaundice often
depends on stones in y.e biliary ducts; w.ch pass through them but
slowly, & it has often happened y.t a medicine given accidentally
at y.e time y.t y.e stone was expelled had y.e credit of effecting y.e cure.
It is no easy matter to account how these med.s act in
promoting y.e passage of y.e stone; besides we cannot draw
any conclusions from what y.e Author of this Theriac has said
on y.e subject, as he always employed other med.s at y.e same
time y.t he gave y.e Bark, & did not seem to pay a proper atten-
tion to y.e cause of y.e Jaundice
The Bark has also been employed for y.e cure of y.e Chincough; & there
is no doubt, but what y.e bark is of considerable use in this case. This
seems to be an argument y.t this disease is of y.e spasmodic kind,
so if it is allowed y.t y.e disease is of a spasmodic nature, y.e
indication of y.e bark seems well founded. Whenever we can pre-
vail on a child to swallow a sufficient quantity of y.e bark it will
prove almost a certain cure for y.e chincough, & it even succeeds when
injected; but not so constantly. We must however pay some atten-
tion to y.e proper time of exhibiting it. When y.e disease is recent
& there are symptoms of an Inflammation of y.e Lungs, whilst there
appears no solution of y.e spasm nor expectoration takes place,
I imagine y.t in this case y.e exhibition of y.e bark is dangerous, &
bleeding & emetics should be premised. It often happens in y.e Chin-
cough y.t a bleeding at y.e nose & spontaneous vomiting come on, both
w.ch are favourable symptoms; & therefore we should not never give
the Bark unless these evacuations have taken place, either by Nature

or not, or only
been when they
enough. We need
[illegible] of different
we may give it
time. The only
[illegible] of view of
[illegible] having, &c
of governors, inter-
[illegible] only to
[illegible] of
[illegible] to obtain
[illegible] quantity. If
[illegible] the tendency
of [illegible] is rather
[illegible] down
something on
[illegible] myself
effect [illegible] of both
or [illegible] or
[illegible] We have
[illegible] but we
[illegible] only during [illegible]
[illegible] matter of the
[illegible] on, but
again how [illegible]
[illegible] of pain, [illegible]
by this method
[illegible] common

or Art, or unless we are sure y. there is no infarction in y. Lungs;
but when they have taken place y. bark is always given w.
success. We need not pay any great regard to y. fever y. accom-
panies y. disease, except it be in y. beginning of y. disease; but
we may give it freely when y. Distemper has continued for some
time. The only caution we need to regard in this: We should avoid
giving it in y. Evening hours; for y. fever always increases toward
and Evening; & we should therefore rather give it in y. Morning
& forenoon; intermitting its exhibition about Noon —
I have only to add one more practical direction, w.h. I had not an
opportunity of mentioning before. I took notice how apt Intermittents
were to return from habit; w.h. leads us to give y. bark in considera-
rable quantity. It has been said y. y. bark does not cure Quartans.
In them the tendency to continue is very great & a large proportion
of bark is necessary; we should not limit y. quantity but give it
in as large doses as y. stomach will bear. There are Instances of per-
sons taking an Ounce for a dose w.out any bad consequences, &
I have myself seen 3ss given w. great safety. In general y. bad
effects of y. bark are owing to our giving it in improper diseases,
or under unfavourable circumstances, & seldom of y. quantity y. we
give. We are often at a loss w. regard to y. proper time of giving
y. bark, but we ought never to give it whilst y. paroxysm lasts
& only during y. Interval of ~~y. fever~~ paroxysms. Some are so careful
in y. matter y.t they will not give y. Bark tho y. Paroxysm does
not come on; but stop its exhibition untill y. paroxysm should
again have gone off. But if y. paroxysm is stopt & there is no
sense of pain, Languor &c. we may continue it w. safety, & I have
by this method seen Intermittents cured y. would not have yielded
to y. common practice

It has been objected that Intermittents cured by ye use of ye Bark are apt to return
ye there is no end of procuring in ye Bark & ye Constitution will be destroyed
by it. But I am persuaded ye this is owing to our not continuing ye
bark in sufficient quantity; for tho ye paroxysm disappears for a
short time; yet as the tendency still remains, it soon gains strength
& returns. We ought therefore to proceed in this manner. After ye dis-
ease is removed we should return to ye use of ye Bark in 3 or 4 days
after ye in ye Interval of a week, & so on during ye epidemic sea-
son if I may so call it

We are next to take notice of ye pharmaceutical treatment of ye Bark.
It ought always to be given in large quantities & in substance; for ye
bowels of ye stomach seem much greater upon it than those of any
menstruum out of ye body. It has been imagined, & I think w. some reason,
ye ye bark acts chiefly on ye stomach. Hence it has been said ye all fixed
portions of it pass off by ye pylorus & for ye reason do not answer
so well as ye simple bark w. remains much longer in ye stomach.
This reasoning is ingenious & perhaps well founded; but we not satis-
fied w. ye more obvious one ye our stomach extracts its virtues better
than any other Menstruum. Long boiling also destroys its virtues. If
has been said ye 8 or 4 of ye Extract are equal in virtue to ℥j of ye
but I find ye it requires an equal quantity of Extract to produce ye
same effects as w. ye powder, & it is no wonder ye it is so, if we
consider ye ye long boiling destroys ye texture in proportion to ye
quantity extracted. As ye ext. are not agreeable to all persons, we
may employ Infusion w. ye, if a liquid form is necessary, for ye is prefer-
able to decoction as it is equally strong & preserves ye aroma.
By gentle heat we may again evaporate part of ye infusion &
thus concentrate the medicine

Acorus Verus or Calamus aromaticus.

This possesses both ye qualities of aromatic & a bitter, it ~~only~~ may therefore be placed under either of these heads. It has of late been almost entirely neglected for ~~med.~~ more powerful meds. I place it next ye bark as it has been so ofty employed for ye same purposes; & there are well vouched for cures of Intermittents being cured by it. I have also seen it tried & proving effectual; but further experience must determine whether we can depend on it in ordinary cases. It is much of ye same nature w. ye bark: it is aromatic, bitter & astringent; but it evidently contains more of an essential oil than ye bark. It must also be given in large doses & in substance. Haller allows ℥ij for a dose. The stomach can bear a large dose of this bitter than of ye bark.

The 3 next plants belong to ye Order of ye Verticillata w. I treated of before.

Chamædrys. This w. ye Chamædrys Gentian & Centaury enter into ye Duke of Portland's powder w. I mentioned formerly. Its acrimony is of ye lactescent kind & hence it is in England called ground pine. Shaw tells us ye in Barbary ye plant is used for ye cure of Intermittents w. also serves to shew that there is an analogy between these plants.

Marrubium is ye strongest bitter of ye 3 & frequently employed for those cases wherein bitters are indicated. Its use is not yet properly ascertained. I cannot agree w. those writers who look upon it as a pectoral.

Dictamnus albus. This is a strong, simple & pure bitter. Many plants have a strong odour exhaling from them, w. I imagine is their essential oil. The Dictamnus albus is ye only one w. I know ye will shew ye inflammability of this vapour, w. will take fire on ye application of a candle. Next to these 2. Ox Rose.

This is a pretty strong bitter w. a slight aroma. I have it from pretty good authority ye it is used in Spain as a sudorific to banish ye remains of ye venereal disease. It has like other bitters ye quality of preventing sples

mentation & acidity in vinous liquors. Hence it is used as a cond.t to Ales. It is very uncertain whether there is any thing peculiar in hops y.t has y.e effect. Before Hops were introduced other bitters were used for y.e same purpose; & poverty still obliges some to make use of others; & it appears from expts instituted for y.e purpose y.t they are equally effectual. But w.t regard to those y.t render Ales most grateful this must be determined by repeated expts instituted w.t diff.t proportions of y.e different. Much has been said of y.e effects of Ales & Beer in calculous cases; but I imagine y.t in y.e quantities in w.h they are generally drank, they can have little effect either in preventing or removing calculi. I think y.e y.t is occasion to think y.t these depend on peculiarities of habit & constitution y.t are not easily removed by diet of any kind.

Trifolium palustre

Both y.e leaves & roots of this afford a strong bitter without any aromatic acrimony, approaching in sensible qualities to y.e Gentian & Centaury; but more harsh & disagreeable. It is applied for all y.e purposes in w.h bitters are used & has been celebrated as an anti-scorbutic. There is no doubt but all bitters are antiseptic w.t regard to y.e fluids & tonic & astringent w.t respect to y.e solids; & may therefore be successfully employed in y.e scurvy; tho not by themselves; but accompanied w.t acescent aliment.

This finishes y.e Amara calida, we shall now make a few Observations on the Pharmaceutical treatment

They are almost universally more agreeable in y.e dry than in y.e recent state. Most of them contain an oil, of w.h a portion is more volatile than y.e rest, & gives a rank disagreeable odour to y.e subject, & w.h I imagine is not without foundation thought to be of a narcotic inebriating quality. This odour is lost by drying; but even y.e mildest & most simple

[illegible] contrary of [illegible]
from [illegible] are [illegible]
y. difficulty of separating
the [illegible] there, [illegible]
be obtained for [illegible]
ri. [illegible] be disposed
them when they [illegible]
oil, y. can be raised
possibly [illegible]
V. can extract a [illegible]
butter is obtained, &c.
a [illegible]. The [illegible]
be disagreeable, &c. [illegible]
is true y. y. butter
back y. some winter
But [illegible] in extract
by [illegible] y. quality
more hard, &c. [illegible]
y. [illegible] y. butter
[illegible]. [illegible] y. [illegible]
[illegible]. Perhaps y. [illegible]
y. same manner. [illegible]
and 2d proper [illegible]
may still retain y. [illegible]
a [illegible] class. [illegible]
[illegible] to y. extract
by adding y. [illegible]
[illegible]. It does not [illegible]
[illegible] added to our [illegible]

bitters, Centaury &c. have some of it. When we expect any considerable effects
from y. are we should give them in substance, both on acct. of
y. difficulty of extracting y. virtues properly, unless they are of a very tender
Rebacous taste, & also from its being sometimes necessary y. they should
be detained for some time in y. Stomach. Another Objection is y. in
y. recent or dissolved State they are much more apt to run off by stool
than when they are dry. Their bitterness does not reside in an essential
oil, y. can be raised by Sim, but in a more fixed partly gummatous partly
resinous substance & therefore it may be extracted both by ∇ & Alkahol. tho.
∇ we can extract a greater quantity; co. Spt. a stronger, purer & more dly.
bitter is obtained, & this gives us some reason to think y. it chiefly resides in
a resin. The more heat y. we employ in y. extraction, y. more will y. bitter
be disagreeable, & by boiling y. whole of y. essential oil is dissipated. If
is true y. y. bitter is more pure on y. acct. but then I think it is pro-
bable y. some virtue also depends on y. Aroma being joined co. y. bitter.
Our View in extracting y. bitters, is to avoid y. disagreeableness. as, 1ly, it
destroying y. quality of y. bitter, renders it more agreeable, Water renders it
more harsh, & Wine, tho rather a watery than a spirituous Menstruum
yet corrects y. bitterness; but it is uncertain whether it does not hurt y.
virtues. All y. fixed acids destroy bitters, tho only a small quantity is em-
ployed. Perhaps y. acid in Wine mitigates y. nauseous taste of y. bitters in
y. same manner. I for my part think it is very doubtful whether
acids are a proper menstruum for acrid substances. The very strong Squills
may still retain y. property; but we cannot apply one instance to
a whole class. Alkali is also added sometimes but this contributes
nothing to y. extraction; for y. solution will receive y. same colour
by adding y. alkali to it after it is made, as if we had added it at
first. It does not however destroy y. qualities & is therefore very pro-
perly added to our bitters if we expect any diuretic effects from them

Leontodon, Dandalion, Lactuca, Lettice, Cichorium, Succory; Endi
Endive

Amara frigida.

These have been supposed of a cooling nature; but they possess no such qualities. It is probable y^t this mistake has been owing to our using them as Diet; for when they are young & blanched we ~~use~~ employ them as condiments or salads. The following* belong to ye Class of Syngenesia, and to ye Semi-floscculosi. The plants of this order are all lactescent & acrid. ~~They are all~~ I have before mentioned to you y^t all ye plants of this nature or y^t contained a milky acrid juice, were supposed to be of a poisonous nature; & y^t ye four here mentioned were ye only exceptions. But even these when they ~~grow~~ are old & grow acrid are often found to possess a narcotic & soporifous quality, we should therefore pay some attention to this especially as Galen has observed y^t ye esculent Lettuce sometimes partakes of these qualities; perhaps this was owing to ye heat of ye climate, & y^t it grew in moist places. These plants also contain an essential Salt; & it has been supposed y^t their cooling qualities reside in this Salt; but this has not been determined by experience; for they do not yield this salt in such a quantity as to give us an opportunity to make experiments on them. ~~They have~~ In medicine they have no other Virtues but those wch are in common to all bitters. Practical writers in general speak of these plants as aperient & therefore look upon them as specific in solving of visceral obstructions. This seems to be confirmed by G. forming purgative if taken in large quantities; & hence they may be useful to hypochondriac people. Boerhave has shewn a particular partiality to ye amara frigida: he supposes that they have a power in dissolving ye Atra bilis, wch he supposes to take place in ye body, & that they also wash of impurities from ye blood. I have known ye Lucens Juice of ye Dandelion given in Draughts of ℥iv but w^t out any purgative or diuretic effects appearing from it. Boerhave also recommends them as saponaceous med.; but I

I shall not mention a Root y. is perhaps y. strongest & at y. same time most pure Bitter in Nature. This is y. Radix Quassia of Surinam, on y. Continent of South America. It was first discovered by a Black Slave, whose Name was called Quassi, & from whom it now goes by y. name of y. Quassi Bitter in Surinam — He employed it for y. cure of all intermittent, remittent & malignant putrid fevers; both in substance & infusion. It has often been found to succeed after y. Bark & other remedies had been tried to no purpose. Dr. Warner from Antigua who was in this place last Summer, informed me that he had given it in putrid fevers w. happy effects when y. Bark was by no means effectual. I have also been informed by a Captain in y. Surinam Trade y. it is now universally used there by every person for a Bitter to prevent those dangerous remittents y. are so common there; but I have his promise to get some — I had only one opportunity of seeing it myself w. Linnaeus who wrote a Thesis on it & gives us two Instances of its great Virtues —

shall here observe once for all that I can have no Idea of a soap or saponaceous med: but what is made by a combination of Oil & Alkali; & therefore calling any other substances saponaceous is saying nothing at all; or speaking in such a manner as not to be understood.

Sudorifics or Diaphoretics this gives us the former in y. particular kind of taste wh. Dr. Lettsom has called a sensibly sooty taste; & also proper Virtues analogous to those. It seems to be rather more powerful than those, & on y. acct promises better effects in y. Hypochondriacs. ——— The next order of Stimulants are y.

Acrid

By this term I mean such plants as are simply acrid & have neither aroma or bitterness joined to y. acrimony, &c

Arum. Indian Turnep

This is a very acrid root in its recent state, but when dried it loses y. acrimony entirely & may then be employed in food; the Indians in y. Country eat it at y. fire & then eat it. It stimulates y. Stomach, promotes y. appetite & digestion, stimulates y. Intestines, if it is given in suff. quantity, it is remarkable for stimulating y. kidneys & as most Diuretics, are pectorals, this also stimulates y. mucous glands of y. bronchia. From these its qualities you see it is akin to y. squills; but it is more pungent & volatile. It is not hardly ever used in practice now, & this for a very good reason, for since it is so difficult to have it in such a form as to be conveniently given internally; for when it is recent or fresh we cannot reduce it to a powder, & when if we dry it we destroy its Virtues ——— Euphorbium

It is an acrid Stimulant used only in external applications. We shall consider it when I come to speak of Rubefacientia, as it is generally employed for y. purpose ———

* Hoffman recommends the root much in paralytic affections. It is a good masticatory in a rheumatic toothach. The Country people in Europe use ye powder for ye cure of Intermittents. The powder mixed w. Lard has ye effect of killing Ringworms

* The best method to use it is to take ye fresh root & macerate it in cold Water: The patient is to drink of ye Infusion as frequently as requires: it will in this manner prove a powerful diuretic. The common one ye grows in abundance in ye marshy grounds about this place will answer extremely well for this purpose & Dr Golden has found it to be a very strong cathartic & purgative.

recomended in a paralysis of ye Tongue. Dr Shaw tells us ye in Barbary ye powder is mixed w. Sugar & applied in Disorders of ye Breast & ye it is added to Clysters in ye Apoplexy & palsy

* It was by this plant that ye Army of Charles ye 12th of Sweden when almost perished w. Cold. It has been recomended for ye Scurvy, Quartan & Dropsy

Imperatoria

This belongs to y. order of umbelliferous plants. The part wd. we employ is the root. It is more acrid than y. umbellatea of wh. I treated formerly.

Iris nostras

All y species of y. Genus are remarkably acrid; the acrimony resides chiefly in y. root. The florentine Orris is also acrid in its recent state. If they are snuffed up into y. Nose they prove very strong errhines, not only causing sneezing but freely inflammation of y. Nose & head. If taken internally it proves a strong cathartic and may be employed as a hydragogue. You see an instance in y. Ed. med. essays where it has been employed for y. purpose. The dose is there said to be ℥ij but this I conceive is a mistake & I should not chuse to venture on more than ℥j, for 50 drops of y. Juice are found to prove purgative. I should at first give only small doses & encrease them as occasion requires.

Pericaria acrens. Aromat

This is a very strong acrid; & its acrimony operates chiefly on y. kidneys, for whence it provokes diuretic. It is remarkable y. its Distilled Water also proves diuretic. —

Pyrethrum

This is employed as a Masticatory to promote y. flow of y. Saliva in the tooth ach. It has also been

Acorus aro

Wine.

In this Country we have no perfectly pure Wines. Most of those we use here are y. produce of foreign Countries, & either before or after they are imported they fall into y. hands of y. Trader or Merchant, where such additions are made to them, in order to guard against y. disease, as contaminate & destroy y. Jovinity. We shall first analyze y. Wine y. is resolve it into its constituent parts; treat of these parts in particular, & then consider them as combined.

All these matters were
for it is almost impossible
stations, but that y. blood

If a person above in taken in
air by gas Sylvestre, by
are nearly y. same in
their place of y. lungs
as occasions a fermentation
the spirits brandy. 1. The
air separated there.
there is will be extracted
of y. stomach, displacing
Alkahest & interrupt y.
so. of y. congeneric of
y. blood air in vessels
formices in strong
of fluids to y. obstructions
& certain circumstances
of meat when they
not arrive at y. degree
Alkahest or y. Menses

y. part of y. Meat
an Alkahest & it is
effect of y. venous
then below precisions
Alkahest. 1. If Alkahest
latin then. 2. If it
hence if it is applied

All Wine contains more or less of ye 3 following parts: Must, pure Wine & Vinegar; for it is almost impossible to have fruit so unfermented or so to conduct ye fermentation, but that ye Wine will partake of each of these 3 parts —

1. Must

If Sugar alone is taken into ye Stomach it will ferment, give out a fixed air or gas Sylvestre, by its uniting wth. ye bile prove laxative &c. These effects are nearly ye same in Must, when ye Sugar is diffused or mixed wth. ye native juice of ye Vegetable or Grape. — Must may first then be considered as occasioning a fermentation & acidity in ye Stomach. Its effects then must be of two kinds. 1. ~~The gas or~~ By fermentation a gas sylvestre or fixed air is generated there. This will have a considerable effect on ye Nerves there, wh. will be extended over ye whole body: This fixed air destroys ye tone of ye Stomach, disposes it to spasmodic Contractions & of consequence will retard & interrupt ye process of digestion. In ye 2d. place ye acidity wh. is ye consequence of ye fermentation, will have ye same effects as ye fixed air in weakening ye Stomach: the Acid ~~will~~ coagulate ye Bile, produces a strong stimulus, & by wh. it occasions a greater flow of Bile to ye Intestines & causes a Cholera morbus wh. violent spasms & copious evacuations by stool & Vomiting. These are ye consequences of Must when they ~~arise~~ at ye highest degree; but ~~the~~ in general they do not arrive at ye degree & are for ye most part much more mild —

Wine or ye Vinous part of ye Liquor. The distinguishing property of ye part of ye Must wh. is converted into Wine is, ye it now contains an Alkohol, & it is to this sole or Alkohol ye we must ascribe ye effects of ye vinous part of ye Liquor or Wine. We must therefore in this place precisely consider ye effects, Virtues & properties of Alkohol. 1. If Alkohol is applied to ye fluids it has ye effects of coagulating them. 2. If it is applied to ye solids contracts & hardens them: & hence if it is applied in hæmorrhages it acts in either way. If it is

applied ~~either~~ suddenly to y. fluids or injected into y. Vessels of living animals even in a small quantity it occasions y. death of y. Animal. 3. I think we need not pay any attention to ~~to~~ the effects it is supposed to have on y. fluids & solids if it is taken into y. Stomach by y. mouth; for the Boerhaave & others have imagined y. it is carried into y. mass of blood & will there produce condensation or rarefaction according to y. quantity given; that hence there will be unequal composition occasioning particular diseases, yet I imagine all this is a mere extravagant hypothesis; for granting y. it is taken up into y. blood, w. hat by no means been demonstrated, yet how can an ℥ij of Alkohol when mixed w. ℔ 25 or 30 ℔. of blood & mild fluid be supposed to have y. least effects on it either in condensing or rarefying this great mass; when the same quantity in an equal portion of water would leave no traces of itself; for & besides Alkohol in a diluted state is not very easily affected by heat or cold, therefore it must ~~be~~ also lose this quality in y. blood vessels. But Alkohol when taken internally acts ~~chiefly~~ on y. nervous system, by means of y. stomach. If it be ~~given~~ taken in small doses it proves a simple stimulus, increases y. action of y. heart & blood vessels, increases y. influx of y. nervous power into y. diff. parts of y. system whence arises more ~~clearness~~ serenity & ease of mind, more clearness & liveliness of Imagination & y. ~~such~~ vigorous exertion of every faculty both of body & mind. But if it be taken in large doses it has a quite contrary effect: it destroys y. mobility of y. nervous power & interrupts its flow to y. Sensor. commune, whence from its mixture of stimul. & sedative effects it first produces a confusion of y. Ideas; if the dose is continued or increased there comes on a delirium; y. influx of y. nervous power is suspended, y. voluntary & involuntary motions are destroyed; there comes on ~~the~~ drowsiness, sleep, Lethargy, Apoplexy & death. There

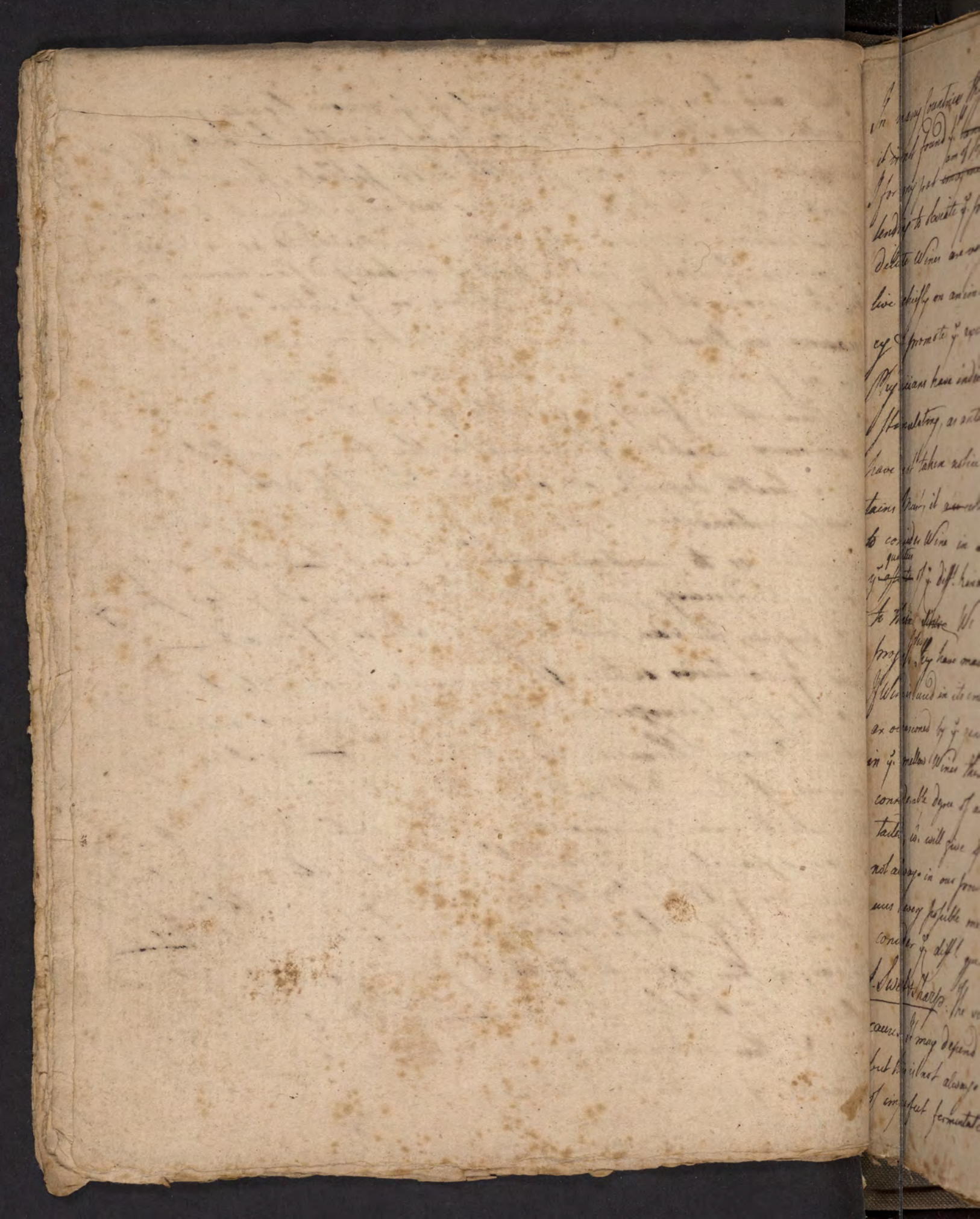
are the effects of the Alcohol
are imparted to the other
these effects are taken in
a more dilute state & one
before another is taken
the more strong
& improper, but if he
more dilute these Alcohol
liquors the other parts of
the liquor of Alcohol
Alcohol & their water with
if a person were to
the same as it is mixed
Alcohol is also more
an inflammatory
in Wine by the Acid of
it may be called an
the same quantity of
Sometimes also
the stomach is less
than Wine. Sometimes
Spirits & Wine for the
be very accurately mixed
if the Wine had
is much favourable
3. Acid. The Acid of Alcohol
Acid is manifestly
of fermentation &

are ye effects of ye Alkohol or ~~spirituous part of~~ spirits contained in ye Wine. But as they are mixed wd. ye other parts they are much less dangerous than when those spts. are taken in a separate state. For ye Wine is thrown in in a more dilute state & in smaller doses: ye effects of one dose are dissipated before another is taken, & therefore Wine is more sedative & raises ye spts. more. However by too free a use of Wine we produce Delirium & even stupor, but it is seldom attended wd. death; for besides its being more dilute than Alkohol, it stimulates ye stomach & is soon vomited up. Besides ye other parts ye enter into ye composition of Wine moderate ye bad effects of Alkohol. I shall not positively determine whether Malic Alkohol & Acid enter into ye composition of every Wine; but this is certain, yt. if a person were to drink ye same quantity of pure Alkohol yt. he does as it is mixed wd. ye Wine, it would probably destroy him. Alkohol is also more of an inflammatory nature & more apt to produce an inflammatory Diathesis than Wine, for this effect is moderated in Wine by ye Acid yt. is present. This is proved by ye Jopitian of Journeck wd. may be called an artificial Wine, for this is less noxious than ye same quantity of Dis: diluted wd. Water, without any further addition. Something also depends on ye accuracy of ye mixture; for the Journeck is less noxious than mere Alk & it is still more hurtful than Wine. I imagine therefore yt. it is a very bad practice to add Spts. to Wine; for tho it is better than Journeck, & by long digestion may be very accurately mixed wd. ye Wine yet it is ~~for~~ not near so safe as if ye Wine had ye spts. naturally: i.e. a natural strong bodied Wine is much preferable to one yt. is made so by ye addition of Spts.

Ye Acid. The Acid of Wines may be considered as of 2 kinds. 1. That Acid wd. is manifestly evolved & perceptible during ye whole progress of fermentation & wd. probably enters into ye composition of Wines & Alk.

2. That wind is
y. action proceeding
then renders y. Wine
glands & quenches
of fruitful action. I
y. contains, besides
they, to mean it
manner as Brandy
have all y. properties
not their effects; for
to anything, such
as not hastily depend
tic & hypochondriac
go so far as to
air thin producing
that happen for
Wine y. contains
as a perfect homogeneous
quence & head
however of them
are much more
they are separate, in
above for y. Alcohol
y. fluidity of y. Alcohol
Wine y. & this again
effect of y. Alcohol
viz. 1. thin
quantity y. entire

That acid ꝛc. is generated by a part of ye. vinous liquor going on to
acetous process; & if this is in great quantity becomes Vinegar.
This renders ye. Wine more grateful to ye. palate, stimulates ye. mucous
gland & then quenches thirst; ꝛc. it also does in ye. stomach by obviating
putrefaction. Vinegar may always be considered as a mixed body
it contains besides ye. acid a part of unchanged saccharine matter.
By ꝛc. means it may prove laxative in ye. Intestines in ye. same
manner as Must, generate a gas sylvestre or fixed air &c. in short
have all ye. properties of a fresh juice. But pure Vinegar has
not these effects; for by ye. quantity of acid it determines other liq:
acerdency weakens ye. stomach & therefore is hurtful to those
whose health depends on a proper tone of ye. organ eg. the Hypo,
& hypochondriac people. This cooling quality in Vinegar may
go so far as to ~~counteract produce~~ have ye. same ~~bad~~ effects as ye. fixed
air in producing spasms ꝛc. & thus have all ye. bad effects ✠
that happen from an acid being generated in ye stomach.
Wine ye. contains either Vinegar or Must cannot be looked upon
as a perfect homogeneous liquor; it is however a natural conse-
quence & have these in every Wine. The ~~diff.~~ qualities or effects
however of these diff. parts ye. enter into ye. composition of Wine
are much more innocent in this combined state than when
they are separate, in ꝛc. case they have the effects I mentioned
above: for ye. Alcohol & Vinegar obviate ye. fermentation of ye. Must,
stimulus of ye. Alcohol obviates ye. cooling qualities of ye. ~~Alcohol~~
Vinegar; & this again ꝛc. ye. Must guards against ye. inflammatory
effects of ye. Alcohol. There is ~~in W~~ another ingred. in Wine
viz: V. this moderates ye. other qualities in proportion to ye.
quantity ye. enters into Wine



In many Countries they use weak Wines for their common drink, & it is not found y. ~~bad consequences~~ they are attended w. any bad effects. For my part ~~imagine~~ am of opinion y. it is a very comfortable & good practice, tending to obviate y. putrescency of y. animal diet; & hence I think dilute Wines are very proper in those Countries where y. people live chiefly on animal food; for they ~~prevent~~ obviate its noxious tendency & promote y. excretion of y. putrescent parts of our food. Physicians have indeed considered Wine as diluent & moderately stimulating, as antiseptic & promoting y. secretions; but they have not taken notice of its nutritious quality. But as it contains Mucus, it ~~also~~ certainly proves nutritious. We are next to consider Wine in a medical View; for this purpose we must ~~separate~~ qualities of y. diff.t kinds of Wines, as ~~these~~ effects must be proportioned to their ~~diverse~~ We may distinguish Wines according to y. progress they have made in fermentation, into crude, mellow &c. If Wine is used in its crude state it will have all y. bad effects that are occasioned by y. generation of fixed air in y. stomach. But even in y. mellow Wines there is still some undecayed Mucus; often a considerable degree of acidity, so as to render it pricked or apple tasted; w.ch will give y. Wine a diff.t quality. This however it is not always in our power to discover by y. taste, for y. Merchant uses every possible means to conceal them — I shall next consider y. diff.t qualities of Wine

Sweet & harsh: The sweetness in Wines may be owing to various causes: It may depend on y. natural richness & maturity of y. grape but this is not always nor often y. case; it is much oftener y. effect of imperfect fermentation, by racking off y. Wine from y. lees as soon

as y. fermentation is
ched
solution may also arise
tity
y. latter can we
have on y. body, or y.
generate y. gas
ness depends on y.
well in some measure
hol. in Canary
yet are persuaded
y. generation of Ether
in a great measure
may seem cross from
Ether
ness of Wine of y.
our of y. Southern
from every action
Wine being kept a
year. but then can
weakness of Wine y.
liquor. In healthy persons
ged over freely & easily
to a simple food
ti effects. When
the fermentation
coolness, debilitating
although the fare
greatly on y. time

as y. fermentation is liberally active, into new Vessels successively untill it is ch
ed by it, & a Sweetness remains. Of this kind are y. Spanish & italian Wines
ldness may also arise from y. Vintner mixing w. sharp Wines a quan
ty of ab fermented Must. Where the sweetness or crudeness depends on
latter cause we may readily know wha y. effects y. kind of Wine will
ve on y. body, viz. y. same as if y. Must w. I mentioned above: it will
nerate y. gas sylvestre or fixed air, prove Cathartic &c. Where y. sweet
ss depends on y. native richness of y. Grape, y. bad effects of it
ill in some measure be prevented by y. greater quantity of alko
l a.g. in Canary & Tokay Wines, but tho these Wines are very rich
t I am persuaded y. y. Viscidity will in some measure prevent
generation of Alkohol & therefore we also find y. these Wines have
a great measure y. effects of crude Wines on our body. Wines
ay become sharp from diff. Causes. 1. From y. Nature of y. Grapes, y
~~ow or to judge~~ depend in a great measure on y. Climate.
s y. Wines of y. northern Climates have much more sharpness than
e of y. southern. 2. Sharpness, whatever be y. state of y. Grape are
from every active fermentation. 3. Sharpness may be owing to y.
ine being kept a great while, & being partly converted into Vine
r. Just this can then you perceive y. sharpness is a sign of y.
ness of Wine & is therefore cooling, less heating & inflamatory
an. In healthy persons who have good stomachs these may be indul
d more freely & safely than others, they prove a good Condiment
an empty food & likely to be attended w. diuretic & antiseptic
effects. When this sharpness is owing to an unfinished ac
e fermentation these Wines may be hurtful by proving too
ling, debilitating y. Stomach & thus producing arthritic &
hritic pains & gouts & hemorroidal pains, w. we know depend
eally on y. tone of y. Stomach

9. Porter & Stout

1. Flat taste of wines may
That taste may depend
y. age of y. wine. from
air enough
artificial ~~wine~~ oceans
that taste existed already in
y from Spanish Wines in

Brandy almost Pe
simple more or less of
Wines of their kind and
there is an effort to
lower. If we drink Cha
in y taste, it is very
persons regard such Cha
y strong Claret

Strength of y Wine
shall. All wine contain
their quality is not to be
darkness. for same quan
if y. same quantity
at least this is not Obv
count for it in their mea
to a closer surface in
their diffusion over y
ter from y. quantity
that it does not appear
are certain positions, com

Briskness & Flat i.e. more or less poignant.

Flatness of Wines may depend on ye. want of a due degree of fermentation. Flatness may depend may proceed fr too great ripeness & mellowness & age of ye. Wine. Thus if Wine is kept long in well corked bottles, & does not have air enough to become sour it turns vapid or flat. 3. When artificial ~~wine~~ ferments are used to prevent fermentation they will induce flatness as if Brandy is added to Wines. Hence ye. flatness of ye. Spanish & Portuguese Wines in comparison to ye. French

Briskness almost depends solely on an active fermentation, & always implies more or less of a crude state; & hence ye. more agreeable ye. Wines of this kind are, ye. more dangerous. We distinguish Wines into those ye. are apt to affect ye. Nerves & ye. head, & into those ye. produce sleep. If we drink Champaigne ye. flowers (as it is called) or sparkles in ye. Cup, it is very apt to intoxicate; & hence your experienced drinkers reject such Champaigne as retains its flower long in ye. Cup.

Strong & Weak These are often joined w. various other qualities; but ye. strength of ye. Wine depends entirely on ye. quantity of ye. Alcohol. All Wines are heating & inflammatory in a certain degree, but ye. quality is not to be ascribed solely to ye. quantity of Alcohol ye. is present. The same quantity of Wine diluted intoxicates sooner than ye. same quantity is drank in ye. same time w. out dilution; this is an observation ye. your appearing Gentlemen make. We may account for it in this manner: The Wine is by this means applied to a larger surface in ye. Stomach, & this dilution causes a quicker diffusion over ye. System. Some have endeavoured to explain it from ye. quantity & bulk of ye. Liquor ye. is taken into ye. Stomach but it does not appear to me in this light. The Wines thus diluted ceteris paribus, sooner intoxicating than others, yet their effects are

are also worse cons. We
it is observed y. there
than men. this proceeds
of y. fermentation. If Wine
deuterate or antiseptic
Wine has a double
1. Vinegar & Lees
effects about y. generation
not employ any remedy
there are also more con
2. Mother of Vinegar
Lowness, respect Nature
Roughness depends
respect in y. Juice. 1. Ex
not but a fruit of a hot
ed. a head y. gradually
is always riper than
y. vine prepared from
y. grapes yielding it
y. is approached, y
mess may also depend
closely y. Nature. 4.
fermentation.
stomach; check fermen
y. bowels via, excepts
is. can they determine
5. Stones of Wine
Grapes & Sl. am well ap

also sooner over. With regard to ye quick diffusion occasioning intoxication
it is observed ye those Wines ye provoke urine correct, intoxicate sooner
than others: this proceeds evidently from their being applied to a larger portion
of ye system. If ~~Wine as~~ we wanted to employ Wine either as diluent,
diuretic or antiseptic we should always make choice of ye weakest.
Wine has a double effect on ye system in ye same manner as Opium.
1. Stimulant & 2. Sedative. In a low fever we want ye stimulant
effects without ye narcotic ~~& or~~ sedative qualities; in them therefore we can
not employ any remedy w. equal safety than weak Wine; because w.
them we can more easily stop before ye narcotic effects are exerted.
1. Smooth & Rough. Smoothness depends on ye sweetness or mel-
lowness, except when this is mistaken for flatness.
Roughness depends in ye 1st place on ye natural acidity & want of
sugar in ye Juice. 2. On ye unripe state of ye Juice. ~~At~~ The grape is
at first a fruit of a hard cellular texture, w. is first filled in ye middle,
w. a fluid ye gradually extends over ye fruit; by w. ye juice in ye centre
is always riper than any of ye rest. And hence ye difference of Wines
ye are prepared from ye Juice flowing spontaneously or from
grapes yielding it only by being laid on one another; & from
ye w. is expressed, for every expression gives acerbity. 3. Roughness
may also depend on artificial means. e.g. by ye addition of
lees by ye Vintner. 4. On ye addition of ye Husks or Mash in
fermentation. — Acids or rough Wines are grateful to ye
stomach; check ~~fermentation~~ acescency & are astringent over all
ye prime viæ, except when they are joined w. much spirit in
w. case they determine rather to ye kidneys than actions process
5. Colour of Wine. This depends very little on ye Juice of ye
grape; & I am well assured ye ye red Juice affords a Wine ye is as trans-

[illegible] as y[illegible]
[illegible]
[illegible]
y[illegible] Merchant in this c[illegible]
[illegible] in y[illegible] Wines
[illegible] make them red; if
wines. We can [illegible]
from y[illegible] colour [illegible]
[illegible] y[illegible] history of y[illegible]

few general remarks

The Wines of y[illegible]
[illegible] of a more [illegible]
The reason of y[illegible]
[illegible]
The Tartar be a [illegible]
[illegible] y[illegible] Wines, for we [illegible]
[illegible] are
[illegible] y[illegible]
in y[illegible] but this
There is not y[illegible]
y[illegible] y[illegible] Tartar [illegible]
[illegible] branch [illegible]
Since [illegible] y[illegible]
[illegible] from these we may [illegible]
y[illegible] are just been [illegible]
The Southern Wines are
[illegible] at General [illegible]

parent as y. naturally white. When a red Wine is required, y. red husks are thrown in so y. cateris paribus y. red Wines are more astringent. When white Wines grow brown & rough by age we reject them. y. Merchant in this case gives them a red colour; for we expect these qualities in red Wines; sometimes also they brew these white Wines to make them red; if there happens to be a large demand for red wines. We can therefore ~~draw~~ form no great judgment of Wines from y. colour unless we take in at y. same time y. sensible qualities & y. history of y. fermentation. ~~It~~ I shall next make a few general remarks on y. Wines of y. different Countries.

The Wines of y. northern Climates are generally of a weak body, more acid & of a more sharp taste, & afford a larger precipitation of tartar. The reason of y. greater acidity is easily understood ~~to~~ Tartar accompanies sharpness & austerity & hence we may understand its effects. The Tartar be a purgative, yet it cannot have this effect ~~in~~ imparted to y. Wines; for we do not drink them in such a quantity; & y. laxative virtues ~~of wine~~ are owing, as are to y. acrid wine imparting to y. bile. It has been alledged y. tartarous Wines are apt to produce y. Stone in y. Kidneys; but this can neither be proved by sound theory or experience. There is not y. least ~~resem~~ resemblance between y. Stones generated in y. body & y. tartar of Wines, in y. Nature & Texture. Hoffman tells us y. those who drank rhenish Wines were rather freer from y. Stone than others. Hence then y. diff. qualities of Wines depend chiefly on y. weakness & acidity; from these we may understand y. effects. Particulars of y. kinds of Wines y. I have just been treating of, we have in y. rhenish & Moselle.

The Southern Wines are strong, sweet & unctuous. The Burgundian Wines, y. Gray are at present supposed to be y. best. The Canaries, tho they are more

to y. Northwards yet the
occasion of this arrival to
appeared to y. writing bre
fellowship, but from an
ed & managed in a
Deirdre y. produce an
accordingly more grateful
fit them for transp
10. Hand, & after y. re
climates; in order to
The Italian Wines, as the
strong, but for their
Doubtful they are
be kept alone a year
The genuine Portugal
are the most instan
The French Wines are
may be considered as
in northern climates
The French Wines have
exposed to such an
not is apt to be con
active fermentation
on being
at formerly appreciated
very steady. This fore
the delicate and a
Vin Blanc as it
respect a safe Wine

to y. southward, yet they do not afford such rich Wines as y. former. The reason of this seems to be y. as they grow on Islands y. grapes are more exposed to y. cooling breezes of y. Sea. Madeira Wine is y. growth of a warm climate; but for an accidental taste w.h prevails there at present, it is managed in a particular manner. There are Mountains in Madeira y. produce as weak Wines as y. northern climates. They are more ancient, more grateful & at y. same time more dangerous. In order to fit them for transportation they have a quantity of Alcohol mixed w.th them, & after y. require to be kept for some time in y. warmer climates; in order to acquire a proper degree of activity.

The Italian Wines, as they are of y. produce of a southern climate, should be strong; but for their being checked in y. fermentation they are weak & sweet. They are exported in Flasks covered w.th oil; but can hardly be kept above a year.

The Spanish & most Portuguese Wines cannot be transported w.out brandy, & are the most inflamatory & least exhilerating Wines we employ. The french Wines are w.th great Justice preferred to ~~other~~ y. others. They may be considered as northern Wines & y. best of them are produced in northern ~~climates~~ Provinces e.g. Burgundy & Champaign. The french Wines have heat enough to give them strength; but are not exposed to such an active fermentation as y. former & therefore not so apt to be combined w.th Alcohol. Champaigne as it is in active fermentation is not so safe as y. mellow Burgundy. Burgundy being formerly exported in Flasks was never properly mellowed & was very heady. This practice is now forbidden, & we have now a less delicate but a ~~much more safe~~ safer Wine & y. is much safer to y. drawer. Claret as it is weak & transported w.out spt. is in every respect a safe Wine.

I have in my last lecture
offered to do so for
members of the of Whom
cause of Weakness & c
& consequently of y. Stomach
y. hypochondriac disorder
Skin is extremely
Patient strength is
cordial that can be
in various kinds of
be received under two
1o. debility & languor
Liquors
& y. former head
2o. Air therefore
y. can be made use
in new Diseases it
tients are often brought
In the Diseased Pati
tical in their case W
ment it will never
ting vacating Vessels
is most effectually
Wine further in this
stated to do, for he
of y. yes, & he says
y. most effectual
heat

I have in my last Lecture spoke of ye. diff. qualities of Wine & the effects of it as far as relates to these qualities; & I shall next mention ye. use of Wine in diseases. — It is serviceable in all cases of Weakness & Languor, effecting whole System: In indigestion & Weakness of ye Stomach, such as are ye. constant attendants on ye. hypochondriac disease: a chearful glass therefore of a generous Wine is extremely necessary in this Disorder. — When the Patient strength is exhausted by long diseases, Wine is ye. best cordial that can be given him. It is also an excellent remedy in various kinds of fevers: I formerly told you ye. fevers might be reduced under two heads: viz: those that were evidently attended w. debility & Languor: & those ye. were of an inflammatory Nature. ye. former head belong ye. nervous & putrid or malignant fevers. In this therefore Wine is an excellent remedy, & indeed ye best ye. can be made use of. Good old Claret is ye. properest Wine in these Diseases; it restrains ye. colliquative sweats by w. ye. Patients are often brought to ye. Grave, & supports ye. strength of ye. sick. In these Diseases Miliary eruptions sometimes come on & prove critical; in this case Wine will support them; & if it be given w. judgment it will never force out these eruptions as ye. other stimulating & heating Cordials often do. The wakefulness w. is so very great is most effectually taken off by Wine. Dr. Gilchrist carried ye. use of Wine further in these cases than any other physician ever attempted to do, for he gave it even in a high delirium & inflammation of ye. Eyes; & he says he always took in these cases found it ye. most effectual remedy to procure sleep. But if it is found ye. it heats ye. patient [illegible] ye. delirium we must abstain from its use

If Bleeding it must
it do, & to bring
Fever in y. arm of
y. quantity of 2 Bottles
ounces and Bottle
only be determined by
Blood on y. particular
vessel Pulse. —
show only its entire
y. symptoms & force
mand & Intensity, of
violence of y. fever.
Yellow fever, but
of an inflammatory
tail & when the
seldom y. can in y.
Author have greatly
has an Instance of
mentioned of Mobile
day p.m. was seized
Whether is proper
and as it is our form
in Disease

But when it makes ye Pulse fuller, softer & slower, as I have known it to do, & to bring it down from 168 to 115 in a Minute, we should continue in ye use of it; & I have thus known it to be given to ye quantity of 2 Bottles in a day; but in general we should not exceed one Bottle; ye precise quantity however ye is necessary can only be determined by experience & by ye particular effects wch it produces on ye patient. It is best to give it in ye form of a coak Regue. — It acts in these cases by supporting ye vital power, & by its antispasmodic & antiseptic effects it takes off ye spasms & ~~forces antiseptic~~ destroys ye putrescency in ye Stomach & Intestines, ye by its irritation adds considerably to ye violence of ye fever. Hence it is not only confined to ye nervous & putrid fevers; but it is also often seen in ye last stage of an inflamatory fever, when ye powers of life begin to fail & when the disease tend to putrescency. This is not seldom ye case in ye small pox; & you will therefore find ye Author have greatly commended it in this disease. Dr. Wright has an Instance of an Officer who laboured under a malignant kind of small pox & who drank 7 Bottles of Claret in a day, wch was found to be ye only thing ye had saved his life. Wine then wn. properly managed proves an excellent remedy, and as it is our comfort in Health, it wn it affords us succour in Disease

Mall

Effect an answer as perfect
every Candidate to y. Office
give a considerable force
restricted than Winds;

Yet as they are more
object from y. rain
are useful as Stars
expeditiously will effect.

Lodge & Cell Ller & Spar
of fabrication, y. Principal

We are apt to
from y. Animal

The animal bodies
are in themselves of
we can have many
many animals, & perhaps
a considerable ceremony
under y. head of Species
not reduce any formal
we except a few y.
markable of them are
from y. common
he calls effence & forg
strong Simulants
Stimulating effects
Fire Ants y. from

Malt Liquors.

These are never so perfect as Wines, wch. is not owing not only to our want of care, but also to ye difficulty of conducting our fermentation. They contain a considerable portion of farinaceous matter, & are therefore more nutritious than Wines; but they are more acescent, more laxative, & as they are more viscid they are less diuretic. — We never order them as Meds. for ye cure of Diseases; they only disease in wch. they are useful as Drink & medicine is ye Scurvy, for wch. they are exceedingly well adapted. — In order to have a thorough knowledge of Ales & Beer it is necessary to attend to their process of fermentation, ye principles of wch. are however still little understood.

We are next to consider those stimulants as are taken from ye Animal Kingdom

As animal bodies are composed of mild & bland substances & are in themselves of a mild nature, it cannot be expected ye we can have many stimulants from ye animal kingdom. In many animals, & perhaps in all, some of ye secreted fluids have a considerable acrimony, & we shall have occasion to treat of these under ye head of Evacuants. But under this head we can not reduce any stimulants taken from ye anl. kingdom except a few ye belong to ye Class of Insects; ye most remarkable of these are ye Cantharides or Spanish Fly. From this common ace. wch. we make of these in Blisters, we may be well assured ye they have a considerable acrimony, & will be very strong stimulants when taken into ye body. And indeed their stimulating effects are so considerable ye they can only be taken into ye stomach in very small doses. This is not by

cause they are ordinary
have the peculiar disorder
we give them in large
these that above are
It is indeed a curious
that the Distant fa
affected by Sympathies to
to their stomach. I
say, some sick they
mass of matter y. is contin
from operating their whole
they will scarce have
entire mass of blood th
inactive; but by being
of y. blood they are
kidney & consequently
This is proved by y. fo
form they will not
I have known ye pro
but if the over dilated
effects could be foreseen
but upon y. proper de
eliminate them prove
in dropsies. But they
cases; the may be pa
& also to their effects

now they are sedatives powerful stimulants to y. whole System, but they
have a peculiar tendency to affect y. urinary passages, as y. whether
we give them in large or in small doses they will still stimulate
those parts above any other, & sometimes hardly at all affect y. whole System.
It is indeed a curious Phenomenon y. they should stimulate a ~~distant~~
part ~~to y~~ distant from y. to w. they are applied, w.out in y. least
altering y. Intestines or prima viæ, y. parts w. are most contiguous
to the stomach. I think we may account for it in this manner.
In y. prima viæ they are constantly & equally diffused through y. whole
mass of matter y. is contained there, & this is sufficient to prevent them
from exerting their stimulating effects, for unless they are concentrated
they will scarce have any effects. When they are united w. y.
whole mass of blood they are still greatly diffused & therefore still
inactive; but by being at last diffused only in a particular part
of y. blood they are again collected in y. natural form in y.
kidneys & consequently will there exert their stimulating effects.
It is proved by y. following expt. If they are given in a very diluted
form they will not affect y. body at all nor even y. kidneys.
I have known ℞ grain given in powder bring on a strangury
but if this was diluted w. a considerable quantity of Water too much
effects could be perceived from it. This renders it very difficult to
hit upon y. proper dose. When they are carried to y. kidneys they
stimulate them, prove diuretic & are for this reason recommended
in dropsies. But they are never attended w. certain effects in these
cases; this may be partly owing to y. our manner of giving them,
& also to their affecting y. neck of y. bladder w.out producing diuresis.

They have also been ex
very dubious whether
I shall hesitate
matory nature of w.
is so peculiar a m
often some considerable
flammatory quality h
of effect
endeavoured to prove
inflammation. The
have also been repeat
of. This is in y. Lega
ever have as in y. c
in either case they
often be of great ser
very disagreeable effects
what degree of inf
They may also prove
y. I need generally
tendency of using them
I would not however
retic. but I am
of y. skin in a c
y. we should chiefly
The Beneficial
also be supposed factors
w. the have been tried

They have also been used in nephritic complaints; but I think it is very dubious whether diuretics should ever be employed in these cases; but I cannot hesitate in rejecting those at least y. are of an inflammatory nature, of w. Cantharides are so in particular; as they do in so peculiar a manner affect y. Neck of y. Bladder & Urethra & often cause considerable inflamations in those parts; & by this inflammatory quality however they often cure Gleets in those parts. I spoke of this effect before when I was treating of Balsamics, & on recovered to prove y. they cured these complaints by inducing an inflamation. The Med. generally employed for a Gonorrhoea benigna have also been extended to y. cure of y. fluor albus. The seat of this is in y. Vagina, & therefore they may act in y. same manner here as in y. cure of y. Gleets; but here I must observe y. in either case they are but a doubtful remedy, & tho they may often be of great service, yet they are not seldom attended w. very disagreeable effects; for we have it not in our power to excite that degree of inflamation we please. As they are diuretic they may also prove diaphoretic, & it was probably on this acc. Dr. Mead prescribed for y. cure of y. Lepra. I have had an opportunity of seeing them tried in this disease, but to no purpose. I would not however from hence infer that they are not diaphoretic. But I am of opinion y. the Lepra is a topical disease of y. Skin in w. internal med. will have no great effects; but y. we should chiefly use external applications to y. parts as Cantharides are found to be diuretic & diaphoretic, they have also been supposed pectoral. I know however but one case of y. kind in w. they have been tried & y. is y. Chincough, for w. Dr. Burton has em

Adopted then, that you are
of opinion w.ch y. Black Oxide
Cantharides; that the Dan
es y. may a effects y.
Med. have been informed
medicine, y. they frequ
the reader are found to have
good effects from it, but
y. some quantity of the
The sed. suppose th
fricion that at best th
would not never cure
by w.ch it might produce
tends their exhibition
in y. operation when
Dy. in many diseases
arising Poisons; but
same virtues, I shall dis
proper Cap. of their det
Q. D.
Amou. have been y. spe
of exhibiting Cantharides
y. they are antidotes to
be taken in substance
does not
deserve a serious consid
whether they should be gi
y. if they are given in
larger doses, as they
perhaps be gradually

ed them. But you are to observe y. he never gives them alone, but always
ned w. y. Bark & Camphire, w. to correct y. bad ~~effects~~ qualities of y.
tharides; ~~but it~~ And it is no difficult matter to see y. y. Bark
y. remedy w. effects y. cure whilst y. Cantharides have y. credit of it;
ve been informed by some practitioners y. who employed Dr Burton's
dicine, y. they found all y. inconveniencies attending y. medicine y. Can
ides are found to have ~~wh~~ when no addition is made to them, & no
d effects from it, but such as they had reason to expect if they had given
same quantity of Bark alone — I have now enumerated to you
real & supposed Virtues of Cantharides, & you can now readily
ieve that at best they are a precarious remedy. I for my part
ld not never use them whilst I could think of any remedy
w. I might produce y. same effects, w. out incurring y. danger y. aty
d their exhibition. But tho they are thus dangerous & doubtful
y. operation when taken internally, they ~~give~~ afford us a sovereign rem
in many diseases when they are applied externally for y. purpose of
ing Blisters; but tho as other meds. are found that poss. y.
ne virtues, I shall defer y. consideration untill I come to y. proper
ter Class of this set of Medicines —

ious have been y. opinions of practitioners about y. proper method
exhibiting Cantharides. The Ancients imagined y. y. several parts of
fly were antidotes to one another & therefore ordered y. y. fly should
taken in substance & none of y. parts be separated; but this opinion
not
ows a serious consideration. It is of more importance to determine
ether they should be given in substance or in solution. It is possible
if they are given in substance we may venture to give them in
ger doses, as they will not be extracted at once but by degrees &
shaps be gradually & more successfully dispersed wol y. system.

But if we consider
they are good Dependen
be bitter to give them
are exercised generally
yet have prosperity
Sweets which
are decompounded by
in a watery substance
curious. For this
Succus in y. primae
of Urine y. is
y. bathers are
y. we should allege
encrease y. dose
simple structure of y.
one of y. W. dispens
est y. detention of y.
quantity y. dose of y.
add any thing to y. W.

Mill

This should
them are discoveries in
Boyle in his natural
they then are not
in y. beginning of
possessions of Urine &
the first, & Laurenbe

d then if we consider ye. their Virtues are very readily extracted, we cannot
any great dependance on what I just now said, & it may perhaps still
better to give them in ye. common & method of solution. Their Virtues
extracted equally by water & spirituous Menstruums. It has not
been properly determined what are ye. constituent parts of these
ets, whether resinous, saline &c; nor it is it known whether they
decompounded by solution. But whether we give them in substance,
in a watery fomentation or spirituous tincture, ye. dose is still very
certain. For this depends on ye. state of ye. body: on ye. quantity of
ues in ye. primæ Viæ & particularly in ye. Kidneys: & on ye. quantity
Urine ye. is secreted naturally or at ye. particular time on which
Cantharides are given. I ~~shall~~ only ~~for~~ co. regard to this brave
we should always begin co. very small doses e.g. 5 drops & gradually
ease ye. dose until ye. urinary passages become affected co. it. The
ple tincture of ye. Lond. Disp. is preferable to ye. ~~of~~ more compound
of ye. co. dispens. for ~~y~~ tho ye. substances added in ye. latter ~~agree~~ coincide
ye. intention of ye. medicine, yet they are only added in such a small
antity & ye. dose of ye. R. is so limited by ye. Cantharides, ye. they cannot
d any thing to ye. Virtues of ye. Medicine

Millepeda

have been recommended for various disorders by Authors. Dioscorides used
m as a diuretic in a dropsy; in obstructions of ye. Viscera & Jaundice &
Boyle in his natural philosophy tells us they sharpen & clear ye. Eyesight.
say there are not equal wanting ye. shew they have been of service ~~when~~
in ye. beginning of a Cataract. They have also been recommended in Suppr
ressions of Urine & in calculous Complaints. They are said to ~~have~~ dissolve
e stone, & Lauremberg relates ye. he himself was afflicted co. a stone

in y. Bladder, &c. cure
Insects do seem to contain
Cantharides; but they
there tried for a concide
sis for as they have been
to abound any certain
effects on y. body, they
of a Medicine bringing
doubt nor being able
Effects they for a day,
is swallowed down

Cor

This is an Insect of Cantha
of very great Contrariety
not think they have any
Quadrupeds, but any lay
employed them in ap
mad cattle, Scurvy, Leprosy
only thing they can

We have more persua
of Stimulants, by
Clothes of Bed. &c

Whatever increases motion
strength to y. solids increa
of circulating
of fluids they increa
is by y. action they have
repelled in y. hypoch

y. bladder; co. was displaced & expelled by y. use of these Millepedes. These
ects do seem to contain a Stimulus, of y. same undetermined nature as
ntharides; but they are vastly inferior to these in Virtue. I have known
em tried for a considerable length of time in a Chlorosis & Scrophula, dirge
, for co. they have been greatly commended, but could never being able
discover any certain & considerable effects from them. If they have any
ects on y. body, they are imperceptible, & I have no ~~opinion~~ Idea
a Medicine bringing on any considerable change ~~cord~~ of y. System
hout our being able to perceive it. They are used in ~~debilitance~~ from
ss & ʒij for a dose, or y. expressed Juice of 50 or 60 ~~living~~ alive animals
is swallowed down co. Wine.

Coccinella

his is an Insect of Southamerica & there feeds & lives on y. Cactus; it is
very great importance in y. art of dying; but not as a medicine I do
t think they have any great effects. They have been called diaphoretic
sudorific; but very large doses are required to produce these effects. Sydenham
mployed them in ag. Ischuria. Dale recommends them as an alexipharmac
ac in fevers; Lemery to cure Diarrhoea & prevent Abortions. The But y.
nly thing they are fit for in medicine is to give colour to our meds.

We have now finished y. particular meds. y. come under y. head
f Stimulants, & shall next speak of some general heads or
Classes of Meds. y. may also be considered as Stimulants.

I. Nutrientia.

Whatever encreases motion may be considered as a Stimulant. Thus by adding
length to y. solids encrease their oscillations, & by augmenting y. quantity
of fluids, they encrease y. tension. But their chief effect as Stimulants
is by y. action they have on y. Stomach. Stimuli of this kind are often
required in y. hypochondriac, hysteric arthritic & nephritic diseases;

and in all cases of langu
other remedy; but they
& if ye one of our fam

I have already explained
and mere contraction
ness of ye parts by wh. the
fluids, in co
resolve obstructions. The
gentle but we should
combined, would not be
affected, as fear, it would
matter & astringents fro
rally accompanied wh. a
ye fibre back, as it
is not always proper,
a simple astringent,
not be preferable to ye
this merely as a suff
harm in having
fond of them, ye have
mind, after we find
ways adapt our theo
to adapt them to

Sedatives are almost
stimulate ye heart
effec

and in all cases of languor, debility & faintings from fatigue, diseases or other causes; but they are hurtful in hemorrhages & all inflamatory fevers; & it is one of our first rules to put a feverish person on a low diet.

2. Astringents as Stimulants

We have formerly explained ye. operation of Astringents as tonic med.; by wh. I do not mean contraction merely, but that they increase ye. tension & firmness of ye. parts; by wh. they will give a livelier action to ye. Vessels in propelling ye. fluids, in overcoming ye. resistances they meet with & in removing obstructions. Then we find are ye. effects of ye. most simple astringents; but we should enquire whether Astringents & aromatics ~~good~~ combined, would not be more useful. I imagine that if ye. system was not affected wh. a fever, it would be more useful; but there are cases where a combination of aromatics & astringents prove hurtful. e.g. ~~In~~ Vernal Intermittents are generally accompanied wh. an inflamatory diathesis, & it is often found ye. peruvian bark, wh. is a combination of an aromatic bitter & astringent, is not always proper. I think ye. we should in this case try whether a simple Astringent, such as we have in ye. Walnut & Tormentill, would not be preferable to ye. Bark in this particular case. I ~~now~~ give you this merely as a Supposition, and I think ~~it is~~ there is not ye least harm in having subtilties of this kind, provided we are not too fond of them, & have resolution enough to lay aside a favourite opinion, after we find it is not supported by experience. We should always adapt our theory to facts, & not turn & twist facts in order to adapt them to our theories.

3. Sedatives as Stimulants

Sedatives are almost universally in ye. first operation Stimulants, & very often stimulate ye. heart & arteries considerably, before they exert their sedative effects.

4. Antiseptics

There are also in ye fo
when we come to speak
~~Ther~~ do not act as
those ye are generally
be reported under this

5. Or

The ingredients of these
Calomel, Stimulating in
consistent in phenom

6.

There are Stimulant
be considered as Stimu
to speak of them as

7. Mer

There are more certain
attended w. Salivation
This proves what
expectorant one remedy,
of these effects. We have
it is in reality a
is attended w. diff
ye. where therefore
it ye Subject of my

4. Antispasmodics as Stimulants.

There are also in ye first operation Stimulants, & we shall afterwards when we come to speak of Antispasmodics enquire whether ~~Antispasmodics~~ they do not act as Stimulants. We have at least seen ye many of those yt are generally reckoned Antispasmodics, could be great propriety be referred under this head of Stimulants.

5. Acids as Stimulants.

Tho ye effects of these are sedative, yet they are probably, like other acids, Stimulating in their first operation. But I am more confident in placing in ye 6th place

Alkalies as Stimulants

These are Stimulant in every respect; but they are not merely to be considered as Stimulants, & we shall afterwards have an occasion to speak of them in a diff. view.

7. Neutrals as Stimulants

These are more certainly Stimulating than Acids; but they are also attended be Sedative effects.

This finishes what I had to say of ye Class of Stimulants, if I except one remedy, be could not well ~~come and~~ be ranked be any of those of be we have been treating. viz. The cold Bath. For tho it is in reality a Stimulant upon its first application, yet it is attended be diff. effects from those we have just been speaking of. I have therefore reserved it for this place, & shall make it ye Subject of my Lecture.

emulsion you know of
plea of y. stomach
have not allowed. I have
could not stay upon the
up on your only rolle
but if he were alone
among them of an only
keep. It happens ordinary
ailages matter which
rule in practice not
a debil weakness of y.
in y. intention of them
to y. stomach
extinction of y. stomach
reduce the effects of cold
effects warm & also prove
tone of y. it weakness
tends to relaxation & hence
shoulder general Warm
by fever & when the
in warm bath & found that
effects of bath & effect on the
milder aromatics, y. contain
should have y. same effect
debilitating question
cold & in y. stomach
treat under y. head of
the effects of hot & cold
they have these they

emulsion, you know y. it soon ~~w~~ curdles & separates. This seems also to take
place in y. stomach, if cold ∇ is taken soon after some oily matter has
been ~~in~~ allowed. I knew a Gentleman whose stomach was so weak y. oil
would not stay upon it at all, but flowed near y. upper orifice & was thrown
up in their oily inflamable eructations. He however got over this in time,
but if he even now takes a draught of cold ∇ after he has eat or drank
any thing of an oily nature, y. oil will separate in y. stomach & be thrown
up. This happens entirely on y. principle y. oil will not unite even w.th mu-
cilaginous matter w.th that texture, but is separated by water. This affords a
rule in practice not to give oil & water together ~~and~~ if y. person has
~~debil~~ weakness of y. stomach — Warm water is preferable to cold
in y. intention of employing a diluent & solvent: it proves a stimulus
to y. stomach, ~~favour digestion~~ & by expediting solution rupture & y.
evacuation of y. stomach it favours digestion very much & hence we must
reduce y. effects of Tea & Coffee ~~for~~ after a full meal. But along w.th these
effects warm ∇ also produces a relaxation of y. stomach, by weakening y.
tone of y. it weakens it over y. whole system & brings on a tremor: it ex-
tends y. relaxation & heat over y. whole surface of y. body & produces diz-
hordes & sweat. Warm Water may therefore be very useful in inflamma-
ry fevers & where there is an inflamatory diathesis, but it is pernicious
in weak, lax & flaccid habits. And this decreases, as I before observed, for y. bad
effects of Tea & Coffee in Habits of this kind — If we were to employ y.
milder aromatics, y. contain a moderate astringency, in stead of Tea, we
would have y. same effects of promoting digestion w.out y. relaxing &
debilitating qualities y. this is found to have. There are y. effects of warm
cold ∇ on y. stomach, except what regards y. emetic property, w.ch we shall
treat under y. head of Emetics —

The effects of hot & cold ∇ are entirely y. same in y. Intestines, because by y. time
they arrive there they have gained y. temperature of y. body. The effects of

cold Whey from y. stomach
after all other articles in
the y. Petersham Water fo
contained in them, was
by giving greater fluidity
to which it has a tendency
y. bowels to such a degree
tion. For if it be given
two it will increase y.
purgative. If it is by the
orient. Waters, so often
air heal. of their effects
Dij of mint. Water is
more powerfully than Dij
order such Waters are
ake drink them in com
effects, but also their other
other take them only in
certainly
ei y. effect purgative, fo
ter y. peculiarly cathart
effects of other Laxatives.
Table & favour the
Table & important
ed. constitute such
y. scrofula is a disease
ter will not only dilate
by most all stimulating
to free themselves from
ex chiefly recommended

cold V may from ye. stomach be communicated to ye. Intestines by sympathy; but
after it has once arrived in ye Guts it has entirely ye. same effects as warm V.
In ye. Intestines Water promotes solution, dilutes ye. Chyle & ye. vicied matter
contained in them, washes off ye. mucus adhering to ye. internal surface:
giving greater fluidity to ye. contents of ye Bowels it will favour absorption
which it has sometimes ye. effect of preventing this entirely by increasing
ye. bulk to such a degree as to stimulate ye. Intestines & promote ye evacua-
tion. For if it be given in considerable quantity e.g. from one quart to
two it will increase ye. peristaltic motion to such a degree as to force
purgative. Nor it is by this only ye. we can explain ye. purgative effects of some
min. Waters, viz. often act so merely by ye. dilution in wh. ye. saline matters
are held; & their effects may be increased by increasing ye. solution, e.g. Ijss or
ij of min. Water in ℔ ij there is only ℥ijss of Glauber salt dissolved, will purge
more powerfully than ℥ijss in ℔ ij there is only ℥ij dissolved. When we therefore
prescribe mineral Waters we should never limit ye. dose, for we find that those
who drink them in very large quantity, not only obtain their purgative
effects, but also their other Virtues, in a much higher degree, than those
who take them only in a small quantity. From this it appears ye. Water
is ye. safest purgative, for it acts merely by its bulk or quantity it has no
ye. stimulating inflammatory effects of some, nor ye. debilitating weakening
effects of other Cathartics. — If Water is taken up into ye. lacteals it dilutes
the Chyle & favours its mixture wh. ye. Lymph; but its effects are more confi-
derable & important by washing out & cleansing ye. mesenteric glands,
which constitute such a great part of ye. lacteals. — We now know ye.
scrophula is a disease of ye. Lymph & often affects ye. mesenteric Glands: Wa-
ter will not only dilute & wash out the impurities, but at ye. same time
moderately stimulating increase ye. action of ye. Vessels & enable them
to free themselves from ye. peccant matter. Salt & Mineral Waters
are chiefly recommended for ye. cure of ye. disease; but if we consider ye. weak-

of ye. Impregnation & ye. great Variety there is of these Waters, to all wd. however
the same Virtues have been attributed, we have great reason to believe
a considerable part of ye. effects are owing merely to ye. Water. Dr. Rush
who has wrote ye best treatise on ye. subject, says he always found sea
salt Water more effectual in curing this disease than mineral Waters;
but they have this inconvenience yt. for ye great quantity of salt they
contain they limit ye. dose by proving purgative; & this is an inconve-
nience Dr. Rush frequently had to encounter. I know a very emint. Physician
Europe who always joined an equal quantity of fountain Water to ye.
sea Water, whether he ordered it for Children & adults, & he found very good
effects from this combination, & much greater than if he gave either of
them separate or per se. This confirms what I said above yt. ye water has
effect of washing out & detersing ye lymphatic system & at ye same time
moderately to increase ye action of ye Vessels. When Water is absorbed
carried into ye blood it expedites ye freedom of ye circulation & promotes
more free secretion; but there is no danger here for ye quantity causing
so great a distension, for it is soon thrown out of ye system after
ye secretions wch. it promotes. It does this by encreasing ye action of ye Vessels
at ye same time opens those of ye extremities, to give way to ye increased
efforts. It is one of ye safest stimuli, & by diluting ye saline & putrescent
Mass in our fluids, it checks ye intestine motion. By these effects it
renders every secretion as I just now said, but more especially ye excrementitious
secretions of sweat & Urine. By expediting these it washes ye acrimony
in ye coagulable Lymph & discharges ye acrimony out of ye system, & by
diluting ye coagulable Lymph it seems to facilitate its application to the subtle
parts or its filtration along our simple fibres. This is illustrated by ye
practice of ye farmers in England. They find that their Calves are much
better nourished & fatten quicker by mixing an equal quantity of Milk

w. y. [illegible], then by giving
for from y. [illegible] medicine
y. [illegible] of y. system
y. system & which
y. system
Advance more prosperity
If any of the substances
y. [illegible] of y. [illegible]

Vol: alkali. This from y. [illegible]
a time y. its attendance
think is confined to y.

Vegetable Alkali. These
tici. if we they are in y.
y. mass of blood, & were
lymph. But in y. [illegible]
body; but all y. difficulties
that are taken internally
they are taken into y. stom
circumstances & y. difficu
tainly have no great effe
& we can give them

Quicksilver. This must
have any effects on mus
in lim greater quantity
such a large portion as
Besides it is employed as
it is neutralized in y. st
y. Alkali, y. it works
have been used to diffe

y. Milk, then by giving them sour Milk. I think this can only be accounted for from y. Water rendering y. Lymph more dilute & easier applied to all y. parts of y. system. These are y. effects of Water on every part of y. system & I think we may c. Hoffman allow y. it deserved y. title of Panacea more properly than any other medicine.

If any of the substances y. follow are attenuant at all it is from diminishing y. cohesion of y. blood.

Alkalina

1. Alkali. This from y. stimulus it occasions in such a small quantity at a time y. its attenuant powers cannot be observed. Its operation I think is confined to y. stomach & proves a stimulant & antispasmodic.

2. Vegetable Alkali. There is no difference between these in y. medical property. If they are in y. mild state they have no effects as attenuants on mass of blood; & even out of y. body they have no effect on y. coagulable lymph. But in y. caustic state they act very quickly on blood out of y. body; but all y. difficulties y. I have mentioned of substances acting on y. blood if are taken internally take place here, & c. this additional one, y. when they are taken into y. stomach they will always meet c. an acid: under these circumstances & y. dissolution they must necessarily undergo, they can certainly have no great effect in attenuating y. blood in any quantity in which we can give them.

3. Quicklime. This must necessarily be given in a caustic state if it is to have any effects on our fluids. It dissolves y. coag. Lymph & may be thrown in greater quantity than alkali, but can never be given in such a large portion as to have any considerable effects as an attenuant. Besides it is employed as a medicine to obviate acidity; c. it a proof y. it is neutralized in y. stomach, for all c. it may be considered, as well as alkali, y. it exerts only its powers in y. kidneys. Both this & Alkali have been said to dissolve calculous concretions in y. urinary passages.

If we
it very
many cases
If a
afford
has been
of y. Stomach
sometimes
a quantity of sandy matter
This Kind does not
ges of Urine often take
appearance of y.
therefore that Urine
Incrustations & these
on y. record of physick
when
Urea and does sometimes
a similar manner. But
the Lithontriptic Virtues
y. cure will depend
certain y. it is only
have this effect, when
is probably owing to y.
Dr. Whytt, Dr. Alston &
not permit me to
decrease, tho from them
through y. Season
treated that matter already

If we were to reason or theorize on this subject we should certainly imag
it very highly improbable. But we also know from experience y. ~~this~~ in
many cases ~~does~~ they have not this effect. Dr Stahn gives us an Instance
of a person having taken 1500 weight of Quicklime, besides many spoon
fuls & all ~~sensible~~ exputary action on y. stone. — But on y. other hand again it
has been asserted y. Lime water undoubtedly dissolves stones & calculous concretions
in y. kidneys: but then these stones are of such a variety y. y. solution may
sometimes take place. The Urine does indeed sometimes appear turbid and
quantity of sandy matter w. some of a fleshy appearance is discharged.
This however does not prove y. stone to have been dissolved, & such chang
es of Urine often take place from slight causes when there is not y. least
appearance of y. ~~stone being~~ solution of y. stone: before we conclude
therefore that Lime Water has y. effect we should have many more
innovations & these made w. more accuracy than many that are
in y. record of physick. It does however pretty relieve y. poor & strangury
when it ~~is~~ sometimes certain y. no solution takes place in y. same manner as y.
Urea and does sometimes, & it is probable y. Lime V in y. case acts in
similar manner. Another Arg. y. has been made use of to prove
the lithontriptic virtues of Limewater is y. y. urine of y. person
who use it will dissolve stones out of y. body; but it is by no means
certain y. y. is owing to y. Limewater, for Urine will sometimes
have this effect, when y. person has not been using Limewater, &
probably owing to y. vol: alkali present in it. You may consult
Dr. Whytt, Dr. Alston & Dr Stahn on this subject. Our time will
not permit me to be so explicit here as y. importance of y. subject
deserves. ~~to you~~ There still remains a great part of y. Course to go
through & y. season is already far advanced. — Besides I have
treated this matter already when I spoke of y. use of Urea and other

affrim yet in this discu

Sal

There have no sensible effects
give how they should have
a small quantity they are
to be effectual in procur
blood even in a great mea
this property because it
I will not have this effe
as well as Alkali would
y. small quantity on
cannot be yielded. If we
spirits or Vomit, this effe
by ed. the effects of one do
given; for they stimul
We cannot ob y. stimu
into y. blood, if this
any sensible taste or sm
y. head, fermentation

Spir

By these I mean such
approached oil Alkali.
of Ether. This manifest
may be seen in large qua
smaller. If a Gentleman
became a way by Urine
w. any propriety at all

astringents in this disease.

Sales Neutri. Neutral Salts

These have no sensible effects on ye coag. Lymph out of ye body, & I cannot imagine how they should have it in ye body, especially if we consider ye in what small quantity they are generally given. They may indeed at first sight seem to be effectual in preserving, if not in inducing, fluidity of our blood. Our blood is in a great measure kept fluid by ye serum & it seems to have this property because it is impregnated wth a saline matter; for common S will not have this effect. From this we might imagine ye Neutrals as well as Alkalis would increase this ~~effect~~ quality of ye serum; but if we consider ye small quantity in wch they ~~are given~~ can be given, we must be satisfied ye this effect cannot be great. If we give them in large quantities they will either purge or vomit; this obliges us to give them repeatedly & in small doses, & wth the effects of one dose will be nearly over before another can be given; for they stimulate ye kidneys & increase ye secretion of Urine. We cannot dt ye utmost suppose ye above ℥ss of Nitre can be taken into ye blood, & if this is diffused in 128 ℔s of serum it can scarce give any sensible taste or any sensible action. We shall afterwards, under ye head of purgatives, have occasion to treat of these again.

Sapones. Soaps.

By these I mean such substances as are produced by ye combination of expressed oil & Alkali. The most common wch we have is made of Tallow & Ashes. This manifestly relaxes ye texture of ye coagulable lymph, it may be taken in large quantities, his wife can ill preserve ye fluidity of ye whole mass. On a Gentleman who took about 3 Ounces of it every day, it evidently came away by Urine. These are ye particular advantages ye ~~may~~ can wch any prosperity at all deserve ye name. There have also been observations

formed for y proposed & m
a diversity of y blood &
imperfection y their use i

We next c

Dulcia. Then have you
I think no substance hav
a combination of all these.

Rhetorica. As Vegetable
Lymph by wh means &
may give fluidity to our
length is obtaining flu
on y state of y oeconomy
who live on Vegetables will
chiefly on and food. Bread
remain longer in a vision
y we give them in y Ca

Mr Fre

Under y last head we have
great variety of y fluids
y vessels or how for too
depend on an over powerfu
y force of cohesion of our
might be y cause of Rent
y cause of fluidity, but
mains a doubt will have
fluid. Fluidity then must
be varied in diseases: eith

tioned for ye purpose & merely for their having been found useful in what is called a viscidity of ye blood & poetitia frigida; but I have told you in my formerlecture ye their use in these cases was owing to ye action on ye solids.

We next come to ye general head of medy. ye have been reckoned Demulcents

Dulcia. These have generally been looked upon as a saponaceous nature; but I think no substance has any right to this name, but what is formed by a combination of Oil & Alkali. Their effects as demulcents are very doubtful.

Edulcentia. As Vegetable Aliment affords less nourishmt. it gives less coagulable Lymph, by wh. means & as it is accompanied wh. a good deal of Water, it may give fluidity to our blood. This however I imagine will not go any great length in occasioning fluidity; for ye density of our blood depends very much on ye state of ye oeconomy and wh. regard to ye solids; & a robust laborious man who lives on Vegetables will have denser blood than ye fine gentleman who lives chiefly on animal food. Besides as Veg: are of a less putrescent nature they may remain longer in a viscid state before they are changed; & this is ye reason wh. we give them in ye Scurvy where density & consistence is wanted.

Inspissantia

Under ye last head we were engaged in considering how far a Lentor or too great density of ye fluids might occasion Disease. We are now to consider ye reverse, or how far too great fluidity may take place. This change must depend on an over proportion of fluid alim. or on ye diminution of in ye force of cohesion of our fluids. A defect of Motion it has been thought might be ye cause of Lentor; increased motion might therefore be reckoned ye cause of fluidity; but whilst ye proportion between ye diffr. parts remains motion will have but very little power to render ye blood more fluid. Fluidity then must depend chiefly on ye proportion; wh. may be varied in 2 ways: either by introducing a too great ~~proportion~~ quantity of fluid

absorb: or by ye action
[illegible]
[illegible] ye corporeal
mild, it will rather be
excretion by ye [illegible]
by some ye Water m
ye cellular membran
may imagine ye ad
almost universally
or to a defect of absor
a great quity of fluid
too [illegible] freely they
this to ye relaxation
[illegible]
[illegible] tension of ye ce
fluidity. If this were
certainly follow; but this
it will always be com
With regard to ye dimin
great fluidity, this
far to satisfaction
this fluidity is to be
be effected in two ways:
This can do by attenuating
Cohesion, by heat, [illegible]
Lecture I shall conc

alim^t. or by y^e. retention of y^e. secretions.

With regard

As to y^e. over proportion of fluid alim^t. we may observe y^t. if this be perfectly mild, it will rather be attended w^h. salutary effects, for it will increase y^e. secretions by w^h. ~~y^e to~~ an over proportion will be prevented. It has been alledged by some y^t. Water may, instead of being carried out of y^e. body, run off into y^e. cellular membrane & produce an Anasarca or Ascites. But I do not imagine y^t. a Dropsy has ever been owing to y^e. cause. It depends almost universally on a resistance made to y^e. return of y^e. venous blood, or to a defect of absorption. This makes it doubtful whether too great a quantity of fluid alim^t. can produce diseases. If we use warm liquors too freely they may certainly be hurtful; but then we must ascribe this to y^e. relaxation w^h. they induce on y^e. stomach & over y^e. whole system.

~~The~~ The retention of y^e. secretions cannot scarcely be y^e. cause of too great fluidity. If this were to take place over y^e. whole system y^e. effect would certainly follow; but this never happens, & if the retention is only partial it will always be compensated for by y^e. increase of other secretions.

With regard to y^e. diminished force of cohesion being y^e. cause of too great a fluidity, this can only be owing to y^e. fluids tending too far to putrefaction. We must next consider how this fluidity is to be remedied, ~~If a~~ if it does occur. This may be effected in two ways: 1. by restoring y^e. due proportion of viscid fluids: this we do by Nutrientia, Demulcentia &c. 2 By increasing y^e. force of Cohesion, by Acids, Alkohol & perhaps Astringents. In my next Letter I shall consider their uses in these cases.

By so. [illegible] meant [illegible]
of 2 kinds: 1. such as [illegible]
are [illegible] for particular
by Author under ye name
of ye accompany but [illegible]
who has observed our [illegible]
thing whether ye mucous
ly being [illegible] so. ye fl
or to not to be perceptible
either of a oily or mucilag
mony is lodged in ye cavity
to carry it off by ye [illegible]
most perceptible, & it is de
should first have observed ye
pore orifice principally & e
cased matter either ye co
ye place of ye natural mucu
can in ye intestines: they a
so often [illegible] evidently
prejudice [illegible]
I do not imagine ye ye blood
only greatly diffused & contai
capils are also lubricated & dep
ye internal superficies. It is co
acrimony principally collec
ce of dependents on irritat
inversion of ye urine: for th
& strength [illegible] only
[illegible] ye epithet

Demulentia.

By wh. are meant such med. as correct y. acrimony of our fluids. There may be of 2 kinds: 1. such as are adapted for correcting of acrimony in general; & 2. such as are fitted for particular acrimonies. It is y first of these y. are generally known by Authors under y. name of Demulents: these do not act by changing y. nature of y. acrimony, but merely by sheathing or covering it in imitation of Nature who has covered our solids wh. a mucus for y. same intention: it is y. same thing whether y. mucus covers y. solids for y. acrimony of y. fluids: or whether by being mixed wh. y. fluids, it ~~prevents their~~ sheaths their acrimony in such a manner as to not to be perceptible. Hence all the med. y. are employed as demulents are either of an oily or mucilaginous nature, or else they partake of both. The acrimony is lodged in y Serosity of our blood, wh. serves as a Vehicle for it in order to carry it off by y. secretions. It is in y secretory organs y. y. acrimony is most perceptible; & it is also on these y. only demulents principally act. I should first have observed y. y. acrimony also occurs in y. stomach affects y. upper orifice principally, & causes heartburn; y. demulents by envelopping y. acid matter relieves y. complaint. Demulents are also of service by supplying y. place of y. natural mucus when this happens to be abraded, as is often y. case in y. dysentery: they are also serviceable in defending y. rectum for irritations wh. often induce a violent tenesmus: this may be owing either to hard, acrid or putrid faeces &c.

I do not imagine y. y. bloodvessels are ever affected by y. acrimony: because it is not only greatly diffused & corrected by y. blood wh. is a mild & bland fluid; but y. vessels are also lubricated & defended by a mucus wh. is constantly exuding from y. internal superficies. It is in y. secretory organs as I have already said y. y. acrimony is principally collected & exerts its greatest effects. This accounts for y. use of demulents in irritations of y. ~~for~~ urinary passages, y. are owing to y. acrimony of y. urine: for they are carried in y. urinary along wh. y. acrimony to y. kidneys & sheathe them not only for y. effects of y. acrimony, but are also of service in calculous

& neglected case. When
for it is found not for
time the stagnate & the
irritation creates a con
breast & the emulents
& thus prevention of irr
albeit is not the case but
emulents afford a good
Lessened remedy by giving
emulents will sometimes
given & to great flow
is found not, to sometime
to it helps & is often
otherwise would, even if
may be very useful. If
give pregnant Women
only reason they can have
lubricate by passage &
after y. menstruum flow
can one be removed by
employed for to stop hem
this effect by inspissate
will exist pernicious if
covering - acrimony co. g
shell & ff
emp are y. genera
or employed for y. fourfold
virtues, only differing in de
mucilage - are y. most effe
on y. particular subst

y nephritic cases. Wherever the secretion of mucus is increased, this is always acid; for it is poured out from y. follicles immediately after it is secreted & before it has had time to stagnate & become mild. If this happens in y bronchia it produces an irritation, creates a violent cough & affects y. lungs. In almost all diseases of y. heart ~~&c~~ demulents are very effectual in covering y. acrimony of y. mucus & thus preventing y. irritation, wh. still urges on a greater secretion. The fluor albus is nothing else but an increased evacuation of acid mucus; for wh. demulents afford a good palliative. Sometimes indeed y. disease seems to be continued merely by y. effects of this acid mucus, & in such circumstances demulents will sometimes ~~of~~ make a perfect cure. Demulents may also be given in a too great flow of y. Lochia. In every hemorrhage an acid serum is poured out, wh. sometimes, especially in y. Lochia, irrits & excoriates y. parts over wh. it passes, & is often y. cause y. y. hemorrhage continues longer than it otherwise would, were it not for y. irritation: in cases of this kind demulents may be very useful. It was formerly a practice & is still continued by some to give pregnant women large quantities of Spermaceti or Oil of Almonds, the only reason they can have for it is ~~th~~ to obtain y. demulent effects ~~of these~~ & lubricate y. passages & prevent irritations. It also happens frequently y. after y. Menses have flow y. parts remain sore & occasion an irritation wh. can only be removed by y. external use of demulents. They have also been employed for to stop hemorrhages, but it has been imagined that they have this effect by inspissating y. blood & ~~their~~ hindering its discharge, but you will easily perceive y. it is much more probable y. they have y. effect by covering y. acrimony wh. ~~give~~ occasions y. irritation y. produces y. hemorrhage. These I think are y. general effects of demulents: all y. particular substances employed for y. purpose are entirely of y. same nature & agree in virtues, only differing in degree; those y. contain y. largest proportion of mucilage are y. most efficacious. I shall therefore have very little to say on y. particular substances y. we employ.

All the farinacea yt contain
of a Mucilaginous virtue in
decoction or greater quantity
are in regard to ye foregoing
be employed.

It seems ~~might~~ at first sight
this head, but Experience
good effects in Gleet. I
shall again have occasion
in this place speak over them
be difficult to know in
to ferment in ye stomach
detergent more demulcent
it of its acid & reduce it
demulcent in proportion
ye richer sort & it ye best
application of sweet
Liquorice, it has been
this was true it would
science find ye if it be
will produce ye same effects
any degree so eminent as

Chestnuts

Are ye vegetables ye contain
ye best demulcents of this
mend itself chiefly by ye
bear a proper gelantity
by being reduced into a
a calep

All the farinacea & indeed all y. Nutrientia of y. veg: kind have more or less
of a demulcent virtue in proportion as they yield out either in infusion or
decoction a greater quantity of mucilage: it is this y. must determine
us. regard to y. propriety of exhibiting them & y. quantity in wh. they should
be employed.

Dulcia Sweets.

~~seem might~~ at first sight appears rather doubtful whether these belongs to
y. head; but Experience shews us y. they are useful, & we give syrups wh.
good effects in Catarrh. I formerly treated of these under y. head of Nutrientia,
shall again have occasion to speak of them as Lexatives, I shall therefore
this place pass over them. There are various kinds of sweets, & it may
difficult to know wh. deserve y. preference. Fine Sugar is less liable
ferment in y. stomach than honey, wh. has generally been considered more
urgent more demulcent & balsamic than Sugar; but boiling deprives
of its acid & reduces its virtues to those of Sugar. Fruits are
mulcent in proportion to y. sweetness they contain: the fig contains
richest sweet & is y. best demulcent. We are much limited in our
application of sweet matters, as they generally produce a considerable tiff
ignorance, it has been said is not attended wh. this inconvenience, if
is were true it would be a very valuable medicine; but upon exper
ence I find y. if it be given in y. same quantity as other sweets it
ll produce y. same effects; nor does it possess y. pectoral virtues in
any degree so eminent as has been supposed.

Althea & Lemendeni.

y. vegetables y. contain y. greatest quantity of mucilage, & are therefore
best demulcents of this class y. we can prescribe. The Althaea recom
nds itself chiefly by y. agreeableness of its mucilage; & y. stomach will
r a larger quantity of this than almost of any other. This & the Lemendeni
being reduced into a very fine powder, may be used in y. same manner
as Salep.

as demulcents. We can not
mucilage except Water, for
of y. other. Demur con
done, whereas we should
will Cost. If we give to
prove an excellent dem
necessary for it. Salt
be employed as a mucila
as such as by Glycyr. Sh
be employed for its same pur
an instance of an ad. mu
It is one of y. strongest ad.
contradiction neither this m
as they will add fuel to
in Glycyr. instead of lessen
in y. prima via & ad
difficult or dissolve it fr
2d. is perhaps y. reason

Sedatives have also been
have always been looked u
Sensible mucilage, it is co
Demulcent effects for it in
this & other sedatives do fr
making a sensibility of y.
& also by giving y. mucu
fallible by 2d. it becom

The simple gums such as Gum arabic & Tragacanth are very useful demulcents. We can order a greater quantity of Gum arabic than of any other mucilage except althea, for the stomach will bear it much easier than most of ye others. A common error in prescribing these mucilages is to limit ye dose, whereas we should give them in as large a quantity as ye stomach will bear. If we give to about ℥ij in emulsion we may expect it will prove an excellent demulcent in ye urinary passages, where there is most occasion for it. Starch is a vegetable substance in ye state most fit to be employed as a mucilage & it may be also given internally in addition to such as by Clysters. The salop is somewhat of ye same nature, & may be employed for ye same purposes. The Ichthyocolla or Fish glue affords an instance of an anl. mucilage & may also be employed as a demulcent. One of ye strongest anl. glues; & whenever this is reason to apprehend a putrefaction neither this nor any other anl. substance should be employed, for they would add fuel to ye flame. I have known it applied successfully in Clysters instead of starch when there was an acrimony predominant in ye primæ viæ & not accompanied w. fever. It is very difficult to dissolve it properly & almost not at all w. out a considerable heat, this is perhaps ye reason ye it is seldom employed.—

Sedatives have also been numbered among ye demulcents; & ye seeds of Hyoscyamus have always been looked upon in this light; but it is very evident ye if they have such a mucilage, it is in so small a quantity ye we can never obtain any demulcent effects from it in any dose ye can possibly be given of it. Yet Opium & other sedatives do prove demulcent it is in consequence of ye diminishing ye sensibility of ye part & thus taking off ye effects of ye acrimony; also by giving ye mucus an opportunity to remain longer in ye intestines by w. it becomes thick, mild & bland.

fitted to destroy or prevent

Both ye fluids consists of ye
acid. No portion of them
they are continually wasted
ye only nourishment of animals
all animals live either on
ye do. The current matter of ye
from animal fabricated, in
exhibiting on ye body adapted
then after it will taken into
ye any constant w. ye health
diff. wave: l. inclining to
be in an intermediate
ers ye fruit and fluid. Tho
of think then on ye only
occurring in ye system. If we
numberless kinds of animals
other been owing to
hitherto by no means been
had, it impossible to
takes place therefore
practice of physick ye
bright genius shall
ye cause a rise from
confine myself to consider
as indeed on ye only two
the acid acrimony takes
to a more degree

The next class of Med. are y. Antacida, w. are such remedies as are fitted to destroy or prevent an acid acrimony from taking place.

Both y. fluids & solids of y. animal body are formed from y. aliment w. is acid. No portion of these fluids is of any long duration in y. system: but they are continually wasting & again supplied by y. alim. Vegetable food is y. only nourishm. of animals into w. we have any reason to enquire, for all animals live either on it immediately, or at least on other animals who do. The acescent matter of Veg., for it is by this y. they are chiefly distinguished from animal substances, is converted into an animal nature by y. powers existing in y. body adapted for y. purpose. ~~From this we see that~~ Veg. alim. when after it is taken into y. body goes through all y. steps of putrefaction, are consistent w. y. health of y. animal. Our fluids then may vary in 3 diff. ways: 1. Inclining to acidency. 2. Inclining to putrefaction, & 3d. They may be in an intermediate state, neither inclining to y. one or the other & giving y. proper and fluid. The former constituted y. acid & putrescent acrimony, I think there are y. only 2 species of acrimony y. are distinctly marked as occurring in y. System. If we look into Writers of Medicine we shall find innumerable kinds of acrimony, & indeed every disease has at one time or other been owing to an acrimony; but y. favourers of this doctrine have by no means been able to prove this doctrine, & if even they had, it is impossible to specify y. particular kind of acrimony y. when place & therefore I think we may entirely neglect in our practice of physick y. consideration of them, at least untill some light general shall furnish us w. means to distinguish y. acrimony y. causes a fever from y. w. gives rise to y. Gout. I shall therefore confine myself to y. consideration of y. acid & alkaline or putrescent acrimony, w. indeed are y. only two y. can be distinctly marked.

An acid acrimony takes place when y. veg. alim. retains its acid nature to a marked degree. The first question y. occurs here is when or in what part does this

acrimony take place. We
hope, entirely confined to
y. stomach is y. cause
present opinion. I seem
in y. intestines, for as
is a fluid y. it y. best
nothing will destroy acids
then y. effects when a con
cholicas, vomitings, griping
acido-alkalies, & by ad. it
therefore have little occasion
doubt cure if y. Style is
for if we consider y. fluids
we can hardly believe it a
agents constituted by any
ced it, & it is made to
a fountain of coagulable
the we have to allow y.
coin
agile [illegible] ~~after it is~~
of food, so milk is secreted
have any effect on y.
mony the. By alim. may
by any means follow y.
y. chief great supporter
acrimony & deducing y.
all over undetermined
mining what be effects in
if an acid can be extracted
for an acid may be

ceremony take place. We are sure it exists in y^e ~~stomach~~ prima via & is perhaps entirely confined to ye stomach. Some have supposed y^t it reaches ye blood & is ye cause of diseases in ye fluid. But I am of a quite different opinion. I even do not believe y^t ye acid has ever been found in ye Intestines; for as soon as it comes out of ye stomach it meets wth a fluid y^t is ye best adapted in nature to destroy it, viz. ye Bile, for this will destroy acids equal to Bitters; 2^d ye Bile it forms a combination y^t often has a considerable effect in ye Intestines producing diarrhoea, vomiting, griping &c. — 3^d I treated under ye head of ye fructiferous acido-dulces, & by 4th it is soon expelled out of ye system: We can therefore have little reason to suppose y^t ye acidity ever prevails in ye blood. I doubt even if ye Chyle is ever found pure in ye blood as some have alledged, for if we consider ye fluids it is mixed 2^d in ye thoracic duct & subclavian I can hardly believe it exists there. Moreover it does not appear by late experiments instituted by any of ye accurate physiologists y^t they have discovered it, & it is much more probable y^t former observators have taken a portion of coagulable Lymph wch had separated itself for Chyle. But if we were to allow y^t it did take place, yet it would disappear in ye 12 hours ~~after it is taken~~ for after ye time has elapsed from ye taking of food, no milk is secreted; we cannot therefore conceive y^t it can have any effect on ye mixture of ye blood, or occasion an acid acrimony there. Vegetable^s may indeed give a leven^ce blood, but it does not by any means follow y^t it must be acid. ~~Hence~~ Dr. Boerhaave ye was a chief & great supporter of this doctrine, & indeed he is very fond of ceremony & deducing ye cause of diseases from this. But he was himself very undetermined in this matter for he contradicts in his Chy, what he asserts in his aphorisms. May he even goes so far as to deny that an acid can be extracted from human blood; 2^d however he is mistaken for an acid may be obtained from every animal substance. I think

these y. it is evident
& only take place in
tation of y. stomach
as to produce pecomes
tation of y. acetous
to destroy y health of y
I. It may be owing to
may generate such a gas
all y. alim.t y. is then
This is number of as great
perf. cause of disease; for
alim.t it goes off. 2. it
necessary to digestion as
molecules be a weak fo
alim.t is composed &
& exabsorbed. If weak form
in it; y. secretion then
considerab. If you will fo
to y. tim. y. alim.t is
produced only when the
will have y. effects of mis
tion of y. alim.t is not only
renting y. passage of y.
by y. omission of y. bile
though y. elementary cau
due to y. mere action of y
depend on y. constitution of
topical disease: it is also
cations &c. to perform

then y. it is evident y. an acid acrimony does not exist in y. blood,
only takes place in y. stomach. It may be of 2 kinds: 1. When y. fermen-
tation is of y. vinous kind and produces such a quantity of air or gas sufficient
to produce spasms & other complaints of this kind. 2. When y. fermen-
tation is of y. acetous & produces such a large quantity of acid as
to destroy y. health of y. person; this may depend on a variety of causes.
It may be owing to an overproportion of acescent or veg. alim. &c.
may generate such a quantity of acid as to prove a ferment & convert
all y. alim. y. is taken for some time after into an acescent nature;
this is however of no great consequence; tho it is taken notice of as a
very cause of diseases; for by abstaining for some time from acescent
aliment it goes off. 2. It may be occasioned by a defect of y. liquors
necessary to digestion as a want of saliva. 3. It ~~is~~ much more freqt.
produced from a weak stomach, for by y. natural action of this y.
aliment is compounded & y. air y. is naturally generated is involved
& absorbed. A weak stomach also causes y. alim. to be longer retained
in it; y. evacuation then becomes slow; by wh. y. acidity becomes very
considerable, & you will find y. y. acid is always stronger in proportion
to y. time y. alim. is kept in y. stomach. A very strong acid is seldom
produced unless where there are scirrhosities of y. pylorus, & then it
will have y. effects of mineral acids, erode Linnen &c. The slow evacua-
tion of y. alim. is not only hurtful by causing acrimony; but also by pre-
venting y. passage of y. alim. into y. Intestines & this is not corrected
by y. mixture of y. bile & other fluids it meets wh. in its progress
through y. alimentary canal. We should pay particular attention in pre-
venting to y. weak stomach; it may be owing to a variety of causes, wh. may
depend on y. constitution of y. system in general, for it is very seldom a
local disease: it is also induced by passions of y. mind, by unremitted wa-
tations &c. To perform a perfect cure we must eradicate y. various

causes, y med. adapted for

Astringents, Stimulants &

motion of y. med. y. will a

not therefore cure of each

take away

under y. term of Intoxica

by neutralizing it. They may

y. absorbent Lentiles, y. second

1. If the

Absorbents, & ant. absorb

a good number retained

might at be dispensed w

tally, y. whole absorbents;

found absorbent perhaps

has a considerable reputa

a fourmation; but if fou

ers more purgative than

very. Zij. — The ant. absorb

nature except y. Centaur

has for y. reason been

an astringent kind & th

employed in such cases

absorbent power. —

They do differ in some m

absorb; but this is so

choice. — When y. fo

use of Absorbents they may

y. done for any apprehension

imagined to happen by

hard circuit: for y. formed

ues, by med. adapted for y. purpose: these I mentioned under y. head of
Astringents, Stimulants & y. cold bath. At present I ~~am~~ only to state
ice of y. med. y. will destroy y. acidity present in y. stomach; but co. will
therefore ~~cure~~ take away y. cause of this acidity — By y. med. comprehended
der y. term of Antacida are such as will destroy y. acid in y. stomach
neutralizing it. They may be divided into 3 classes. The first contains
bsorbent Earths: y. second Alkalines: y. 3d. neutral Salts —

1. Of Absorbent Earths. These are of 2 kinds: fossile
bsorbents, & ant. absorbents. — ~~Of y. fossile absorbents~~ There are still
good number retained in our dispensatories of both kinds, tho they
ight all be dispensed co. except two or three. Chalk might serve for
ly. fossile absorbents; this when it is washed from its flint is a
ent absorbent, perhaps preferable to most others. The Magnesia alba
s a considerable reputation as an absorbent, & when neutralized
a purgative; but I find it is no more absorbent than any of y. rest,
more purgative than chalk or crabseyes if given in y. same dose,
. Tij — The ant. absorbents as Coral, crabseyes &c. are all of y. same
ture except y. Cuttlefish co. absorbs a quicker than any of y. others, & it
s for y. reason been proposed to reject it; but this Salt is manifestly of
astringent kind & therefore it may very properly be retained to be
ployed in such cases where we want an astringent joined co. an
bsorbent power. — All the others are of common nature & virtues.
s do differ in some measure co. regard to y. quantity of acid they
bsorb; but this is so inconsiderable y. cheapness may regulate our
oice — When y. presence of an acid in y. stomach demands y.
of Absorbents they may be used co. freedom; we need not at least limit
dose for any apprehension of dangerous consequences co. some have
agined to happen by y. being entangled in y. viscid matter & forming
rd crusts: for y. stomach naturally generates an acid co. would soon

turn
[illegible] the vitriolic & saline
[illegible] system. We should not how
acid, w[illegible] generally for pro
alkaline or fixed
[illegible] acid is too indelicate
Dr. [illegible] has by y. app
septic water. Determined
[illegible] not [illegible] them in
[illegible] in y. his appetite
y. pl. bad consequence w. [illegible]
large on[illegible] will hardly
much acid continually
[illegible] are subject to an
doses of them cant only
after they are joined to
[illegible] & will then like
[illegible] remedy for y. ab
& at y. same time
been held in esteem as
must be owing to their
called liquid shell in
Dr Lettsom has been
y. power of alleviating
owing to its dissolving
absorbent earths have
y. their action is in peace
depends
they become neutralized
Neutrals

turn them into a saline state & by ~~by~~ being dissolved expelle them out of
system. We should not however go too great lengths in taking away ye.
acid, wh. is generated for good purposes in ye. ani. oeconomy & to obviate ye.
tendency or putrescency to wh. ani. substances naturally incline; & if
ye. acid is too much taken away, ye. putrid tendency will take place.
Dr. Pringle has by ye. expts he instituted discovered ye. they were of a
putrid nature & increased putrefaction, for wh. he reason he ~~then~~ advises
not to use them in a dysentery & putrid fever. I think ye. tho his
reasoning is & his expts are just, yet we need not be so very apprehensive
of ye. bad consequences wh. he mentions; for a small quantity, nor indeed
large one, will hardly promote putrefaction in ye. body, as there is so
much acid continually generated as to obviate these effects, & we see ye. persons
who are subject to an acidity in ye. stomach, will take large & repeated
doses of them without any danger of their producing putrefaction. Besides
when they are joined & combined wh. ye. acid in ye. stomach, they are new
lized & will then like other neutrals prove antiseptic, & thus even
being a remedy for ye. absorption of ye. acid. They also prove purgative
at ye. same time moderately adstringent. Absorbents have always
been held in esteem as diuretics & diaphoretics; this virtue I imagine
must be owing to their being converted into a neutral state. The Medicine
called Liquid Shell is a combination of ye. muriatic acid wh. a calcareous
earth; this has been employed in nephritic cases, & it manifestly has
ye. power of alleviating ye. symptoms. This it has been supposed was
owing to its dissolving ye. stone; but it has not ye. effect out of ye. body;
absorbent earths have been employed for ye. same purpose & I imagine
in ye. case
their action depends on ye. acid they meet wh. in ye. stomach, by wh.
they become neutralized & act in ye. same manner on ye. kidneys as
neutrals.

11.

Other Species of Mineral

Lapis Calaminaris

a quantity

shall from its

as to prove abs

Corporeal

I place this here amongst

properties I have already

ties, & shall in a few

Alum applied externally it

useful in

antiseptic virtues. When

as an absorbent & astringent,

& have found

complaints alum very liable

found to relieve these

of its being absorbed & a

is clear

its chief

diseases

owing to its

also acts as an astringent

stops very obstinate

takes a very large quant

lymphatic system,

moderate astringent it

it has accordingly been

in other diseases

Lapis

The fossile

alkali have

fossile

indeed generally

caustic fixed

they differ

The 2d head of Med. belonging to this Class I told you is y. Alkalis.

Volatile alkali on acct. of its stimulating power cannot be given in such quantity as to prove absorbent.

Calcareous Quicklime

I place this here amongst y. Alkalis, because it agrees w. them in several properties. I have already mentioned its antiseptic & lithontriptic virtues, & shall in a few words now enumerate its other properties. When applied externally it discovers an astringent quality & therefore it is useful in lax & flaccid ulcers. Perhaps it may also in this case act by its antiseptic virtues. When it is taken into y. stomach it acts chiefly as an absorbent & solvent, & corrects y. too great viscidity of y. mucus. I have formerly said y. those who were subject to arthritic & nephritic complaints were very liable to disorders of y. stomach. Limewater has been found to relieve these. Some have alledged y. this is in consequence of its being absorbed & acting on y. system in general; but to me it is clear y. its chief operation is in y. stomach, & its effects in these cases are owing to its solvent, absorbent & antacid power. It also acts as an astringent in y. intestines, & has been found to cure very obstinate Dysenteries. As we at y. same time shed a very large quantity of Water w. it, this may wash & detrge y. lymphatic system, & by its also at y. same time being a moderate astringent it might be employed in scrophulous cases, & has accordingly been recommended by some as a very powerful medicine in this disease.

Fossile Alkali

Fossile & Vegd. alkali have as far as we know y. same effects in medicine; Fossile is indeed generally supposed to be milder. When they are in their caustic state they destroy animal substances altogether, & they are therefore very

universally employed by Vary
y. best & as it performs y.
y. milder. When prepared
form as approved to y.
sesiccate to have it in
ployed for y. purpose. The
dispensatory is y. best, as y
a dry form, but also persu
it is not very easily, but
& detergent in various f
chemists & matter sticking
coarsing off every thing y
Alkali to y. pr
ceous matter w. keeps y.
Doctor Pearson has reco
ulers do not bear calcin
ation, with the Alkers a
con y. y. fixed Alkali is
Aloes. It is sometimes
for dressing of Gums. It
absorbent but unless the
Stimulant, so y. it is
is very apt to be given in
Powders than y. earths
as safe & innocent as th
of a Hepar Sulphuris & m
be decomposed if there
act as a neutral. It is

universally employed by Surgeons as Escharotics. The strongest caustic is always
the best as it performs ye. operation sooner & imagine wch. less pain ye.
wch. milder. When prepared wth out an addition it does not retain its dry
form on exposure to ye. air, but liquefies; & as it has been found more
serviceable to have it in a dry form, various methods have been employed
for ye. purpose. The solution as ordered by ye. London College in ye.
dispensatory is ye. best, as ye. quicklime wch. is there added not only gives
a dry form, but also preserves ye. alkali in its caustic state. When
it is not very caustic, but rendered mild by dilution it is a fine solvent
& detergent in various foulnesses & impurities of ye. skin. It takes off freckles, pimples
shews & foul matter sticking in ye. sebaceous apertures. It is very useful in
washing off every thing ye. adheres to ye. body and then at first gives a
& polish to ye skin, but by doing it freqly it washes out ye. sebaceous
matter wch. keeps ye. skin soft, & renders it dry, shrivelled & parched.
Doctor Boerhaave has recommended it as a detergent in ulcers; but in general
ulcers do not bear saline matters at all, as they in general produce inflammation,
unless the ulcers are very foul & covered wth. Crusts. It is for ye. reason
ye. fixed Alkali is now very justly left out of ye. Pr. of Myrrh
& Aloes. It is sometimes mixed wth. Ointments & recommended by some
for drying of Issues. If it is taken into ye stomach it may act as an
absorbent, but unless it meets wth. a suff. quantity of acid it will act as a
Stimulant; so ye. it is a very uncertain medicine as an absorbent, it
is very apt to be given in too large a dose; it has no greater absorbent
powers than ye. earths I have just been treating of, & is not near
so safe & innocent as those. It may however be given in ye. form
of a Hepar Sulphuris & in hope wth safety; for in this case it will
be decomposed if there is a suff. acid in ye stomach, & if not, it will
act as a neutral. It is now even seldom employed as a Stimulant

as its action is too violent
other principle of are not
recommended as a useful
it as a commercial principle
lose it is neutralized it for
balized by y. acid or y. p
neutral salts, & have been
three, below y. fixed alkali
in y. experiments it proves
wine for y. purpose y. use
cachectic, but especially hydro
bitter or w. acids. For if
too acid in y. fermenting
a caustic state or possible
plants, as y. alkali in the
make a distinction betwe
prospicity they all contain
yields it a diff. proportions
generally give a preference
joined to an acid wine, b
be given in a much larg
use of y. this purpose is
than infusion of wormwo
y. alkali much y. done is
y. bitterness of y. wormwood
salts of water, & concent

as its action is too much confined to ye. parts to wh. it is applied, & we have other stimuli ye. are more diffusible & general wh. less danger. It has been recomended as a useful stimulus by Intestines, & Boerhaave speaks of it as a convenient purgative; but I imagine wh. little justice; for unless it is neutralized it proves acrid & inflammatory, & when it is neutralized by ye. acid in ye. stomach, it has no other effects but those of neutral salts, & we therefore wh. much greater propriety employ these. When ye. fixed Alkali is ~~car~~ taken up into ye. blood & again collected in ye. excretories it proves diuretic & is perhaps ye. most powerful medicine for ye. purpose ye. we can employ. It has therefore been used in various cachexie, but especially hydropic cases. We should either combine it wh. Bitters or wh. acids. For if it is taken in a perfect caustic state it is too acrid in ye. fauces & stomach. We must however take it in as near a caustic state as possible, & we therefore very properly use ye. ashes of plants, as ye. Alkali in these is in a caustic state. Some practitioners make a distinction between ye. ashes of diff.t plants; but wh. very little propriety, they all contain ye. same kind of alkali, tho diff.t plants may yield it in diff.t proportions. The ferns yield it in ye. largest quantity; we generally give a preference to ye. Ashes of Broom. They are commonly joined wh. an acid Wine, by wh. ye. Alkali is half neutralized & may then be given in a much larger quantity. The Wine wh. is generally made use of for this purpose is ye. rhenish. Dr. Pringle uses ye. Salt of Tartar & an Infusion of Wormwood together. I ge like this method of giving ye. Alkali much; ye. dose is much smaller than if we employ ashes, & ye. bitterness of ye. Wormwood defends ye. stomach from ye. acrimony of ye. Salt of Tartar, & increases its diuretic virtues. The fixed Alkali is also

a second [illegible] of Mercury
effection [illegible] of Lucerny; but probably
if it Vapor contribute to
ve y stomach & thus hen

Chap

verse of Neutral Salts

These are not strictly so
being composed by y a

This has been said to be
a very slight foundation.
& may then prove abrob
is very specious in
of Physic, if it is mis
safe to take away y
y same time there a

Tartar

This is a most agreeable
ded by the French. If it is f
& is then called y Vel
rally by y name of y
a specific y can be
neutral are liable to be
tartar contains only a
besides it cannot be gi
as Magnesia by chusing y
Fr. by neutralizing the

powerful Solvent of Mucus; but it is not so safe as Limewater, nor is it more
ctical — Huxham has recommended ye. caustic alkali as being ye. cause
Scurvy; but probably from Theory only. For Pringle finds it an antiseptic
& does contribute to bring on ye. Scurvy it acts by absorbing ye. acid
ye Stomach & thus hurrying on ye. putrescency

Our Head of Medy. ye. destroy ye. acid Acrimony
ye. Neutral Salts.

are not strictly speaking absorbents; but they may prove so by
ing decomposed by ye. acid in ye Stomach

Borax

has been said to be an emmenagogue & diuretic; but I think upon
very slight foundation. It may be decomposed by ye. acid in ye Stomach
may then prove absorbent, in ye same manner as other neutrals. It
very efficacious in taking away ye Thrush in ye Mouths & fauces
Children, if it is mixed wd. a little honey. It is however not always
le to take away ye Thrush, for unless we mitigate ye fever at
same time there will be a new eruption in a few hours after.

Tartarus Solubilis Soluble Tartar

is ye most agreeable of ye neutral Salts, & it is much used & recommended
d by ye French. If it is prepared wd. ye fixed alkali it may be got in crystals
is then called ye Sel de Seignette from its Inventor; it is known generally
lly by ye name of ye French cream it a valuable remedy. But it is
purgative ye can be but little depended upon, because all ye tartarous
utrals are liable to be decomposed by ye acid in ye Stomach: & soluble
tartar contains only a small portion of alkali, ye rest is Cremor Tri;
ewise it cannot be given in very large doses. It acts in ye same manner
Magnesia by checking ye acidity. & we might perhaps obtain a better soluble
Tr. by neutralizing Winestone wd. Magnesia

y. Ne[illegible] solution
scent or putrescent pa
fluids to account for
Scurvy putrescency
[illegible] with y
[illegible] they
or never [illegible] but
into y. body which
y. lit [illegible] into its
on what parts of
to y. fluids or does it
acts on [illegible] solids from
seems to from y. mild
antiseptic & anti
y. disease were confin
but y. contagion fix
I will not deny y. it
Instance, served to
or exp. [illegible] & was not
The disease was all
Scurvy y. could
fever is seen indeed
have been on y. fluids
Ded in [illegible] history, [illegible]
y. whole mass of fluids
scurvy, it is little in
Alkalescency in y. blood
quantity of veg. acid
perspiration & urine.
not convertible into fec

y. several ~~excretions~~ excretions & secretions, wd. in health ~~throw out~~ y. alkaly
cent or putrescent parts of her fluids are thrown out. But it is more dif
ficult to account for ye. cause & nature of a putrid fever. In y. case of
slow putrescency may be produced, ~~when~~ tho there is no putrid fermentable
matter taken into ye stomach; but I imagine y. a putrid fever seldom
or never ~~occurs~~ takes place but from putrid exhalations or contagion being taken
into ye body which then acts as a powerful & quick ferment by. B.
ye it turns into its own nature some of y. parts of our body. But
on what parts of our body does it chiefly affect: ~~Is~~ is its action confined
to y. fluids or does it also extend to y. solids. It is evident y. it very greatly
acts on y. solids from y. nervous symptoms y. accompany the fever,
& from y. method wd. be pursued in curing this fever viz. by
antispasmodics & antiseptics; remedies y. could be of no service ~~if~~ if
y. disease were confined to y. fluids. I do not in y. least doubt
but y. Contagion first shews its effects in y. nervous system; but
I will not deny y. it does not also act on y. fluids. I know one
instance y. serves to shew this: A servant in a family who lived chiefly
on veg. food & was not labouring under any affection of y. secretions or
other disease was all at once seized wd. Placidity of y. pulse, a violent
hemorrhage y. could not be stopped succeeded by petechia & a putrid
fever wd. soon ended in death. In this case y. operation must certainly
have been on y. fluids: we have many cases of a similar nature recor
ded in y. History of Typhus, & ~~all~~ few but what ended fatally, for when
ye whole mass of fluids are once arrived at this great degree of putre
scency, it is little in our power to correct it by medicines. A chronic
Chalescency in y. blood & pulse, is only to be cured by throwing in a large
quantity of veg: aliments ~~matter~~ & by opening y. excretions promoting
perspiration & Urine. It is not to be cured by any substances y. are
not convertible into Succum & Sanguinem, ~~but~~ tho they are y. most

However of enterprising
y. y. [illegible] fluids
This is confirmed by [illegible]
what [illegible] partly [illegible]
changes y. state of
Alkalies may also partly
acids. [illegible]
y. virtues of acid in general
medicine

Of A

When they are applied
pass for y. effect of [illegible]
blood from them, but th
y. acids be in a [illegible]
y. oxy: air when we [illegible]
of both ligaments [illegible]
or more neutrals th
their affinity & [illegible]
affections when we [illegible]
to. oily matters y. [illegible]
[illegible] y. acid from cau
would perhaps appear y.
a more accurate [illegible]
service sometimes [illegible]
has been imagined. for
of oil y. [illegible]
to. a [illegible] quantity
are not extended over
a forbearance of its [illegible]
[illegible] will, instead
[illegible] rather a [illegible]

powerful antiseptics or effectual neutralizers of Alkali: for it is reasonable y. y. vitiated fluids should be entirely changed & supplied by new ones. This is confirmed by daily experience & I mention it here as a proof of what I so freely told you y. Med. can have very little effect in changing y. state of our fluids.

Alkalescency also frequently occurs in y. primæ viæ & it may then be corrected by acids. These are of 2 kinds Native & artificial. I shall first speak of y. Virtues of acids in general & afterwards of y. particular acids employed in medicine.

Of Acids in general.

When they are applied to y. Lips they shew an astringent quality, this appears from y. effects of Vinegar w. renders y. lips pale by expelling y. red blood from them; but this astringency does not manifest itself unless y. acids be in a diluted state. For this purpose we use Vinegar or Veg. acid, when we intend to produce this effect, & hence it is also used to foment y. bath Ligaments when they are overstretched. When the acids are stronger & more concentrated they join a stimulant & subsaltient virtue to their astringency, & hence they have been applied for y. cure of paralytic affections. When we make use of them for y. purpose we mix them w. oily matters e.g. Hogslard is employed in y. Ung. paralyticum, to prevent y. acid from causing too great an inflammation. A fluid oil would perhaps answer y. purpose better than Hogslard, as it would form a more accurate mixture. This ointment may certainly prove of service sometimes, tho it is not attended w. such great advantages as has been imagined: for if y. acid be blended w. the great a proportion of oil y. stimulate is not considerable enough, & unless it be mixed w. a large quantity, y. ointment causes inflammation, & its effects are not extended over y. system. It should only be employed where y. is probability of its being effectual from a few applications; for on repeated use it will, instead of removing impair & destroy y. functions of y. nerves. It is rather a doubtful remedy, for its stimulating power is little

after dose or much ha
Acids have are also
lingo. The y. OO & o
the bowels. The Alk
Alkali are applied
corrosive & destroy y.
as far from being taken
by it. The part of y
bed to y. Acid friend
is, as well as Acids a
applied form. You have
acid as effaunta. A
Alkali alternately, in
hair. The other should
would
we oppose y. y. virtues
other, & a mixt of neutral
acid or Alkali from acc
be within for reference
use of Acids when given
Astringent, by taken
for y. urine. They may
to distinguish acids of
they are certainly hard
also by a astringent
Decrease y. operation
act. they are sometimes
allay heat, but cant cal
they displace y. mucus
but they may be used

ta do as much harm as we get good from its stimulant effects.
cids ~~ha~~ are also applied externally to ye nose in hysterick fits & pain
ngo. As ye Oxy & acids are deleterious, we can only use ye vg: acid for
is purpose. The Vg: acid ye is got from vegetables & is ye most penetrating
Acids are applied to cut any mixture in a concentrated state they prove
rosive & destroy ye texture of animal substances. This corrosive quality is
lar for being ~~taken~~ destroyed by ye addition of metals & it is increased
it. Thus part of ye corrosive effects of ye Mineral caustic must be owing
d to ye acid present. The same is ye case w. ye butter of Antimony,
as well as Acids are not convenient caustic application, as it is in
liquid form. You have an instance in Edr med: essays of ye effects of
id as a Caustic. It has been thus proposed that apply acid & caustic
kali alternately, in such a manner ye when ye one began to give
way the other should be applied; but if we were to pursue this method
ould find ye ye virtues of one would hinder & interfere w. ye operation of ye
r, & a quid of neutral salts would be formed, w. would prevent either ye
id or alkali from acting as a Caustic. The whole seems merely to
a whim for refinement. We are next to take notice of
e of Acids when given internally. In ye Mouth & fauces they prove
stringent. Sydenham recommended ye Vitriolic acid mixed w. mel rosarum
for ye Angina. They may be useful when a laxity prevails, but it is difficult
distinguish cases of this kind; & when ye inflammation is violent
are certainly hurtful & dangerous by their stimulant & probably
so by ye astringent power. Acids also excite ye stimulus in ye mouth
increase ye secretion of saliva & mucus, hence they allay thirst. on ye
. they are sometimes given in dropsies, where our intention is to
ay thirst w.out increasing ye quantity of fluids. It has been said ye
they dissolve ye mucus, whether they really have this effect is not certain
but they may be used where there is a load of mucus accumulated in

Mouth. Yet ye: acid b
partly owing to ye Wate
been exhausted to ren
indeed be taken away
evidence, unless in
Brasp answers ye. fo
Acids, when they ar
tl promote ye appetite
ye. vinous & acetous fer
to foment flatulencies
seem somewhat paradox
stomach; but what
necessary, when th
taken & is therefore
ye. mineral acids an
ye. astringency increas
from astringency & a
over ye apple w.
her distress. Acids also
for they promote a fla
they also prepare ye
ye indation ~~being stimulat~~
before ye of this chym
by proper dilation bec
e may easily understand
they may affect ye stomac

tuth. The Vg: acid has been constantly considered as a diluent, this may be
partly owing to ye. Water it contains & also to its Salt. Alum & Acids have
been employed to cure Aphtha; but it is an uncertain practice. The Aphtha will
indeed be taken away by them, but then they are apt to return in redoubled
violence, unless in some particular cases, but it is hard to hit them.
Borax answers ye. purpose much better, especially in Children.
Acids, when they arrive at ye Stomach, prove a grateful Stimulus to it
& promote appetite. Acids by checking putrefaction prevent at least if
not excite appetite; ~~but~~ they do not only obviate ye putrefactive, but also
vinous & acetous fermentation in ye. stomach; on wh. acct. they are used
to prevent flatulencies, & ye. consequences of them. This may at first sight
seem somewhat paradox ye. acids should cure ye effects of ye. acid in ye.
stomach; but what occurs in ye stomach is properly only a kind of
acescency, whereas Vinegar has already undergone ye. acetous fermen-
tation & is therefore much safer to ye. system than acescent vegetables,
ye. mineral acids are still less hurtful than either. If Lemons have
ye. astringency increased by being roasted they will cure spasms arising
from acescency, & a Girl labouring under a Chlorosis may eat a
few unripe apples wh. safety whilst a sweet & ripe one will increase
the disorder. Acids also by their action on ye stomach quench thirst,
for they promote a flow of liquors to it & ~~also~~ prevent putrefaction;
they also perhaps act as ~~cooling~~ refrigerants. This property of acids being only
sedative ~~being stimulant~~ to ye. whole system, seems to contradict what
before said of their stimulating effects, but as acids in a certain dose
by proper dilution become astringent, & as astringents are sedative
we may readily understand how acids will act in this case. Perhaps also
they may affect ye stomach in ye same manner as cold & does for it.

in this country form
other for purpose
contains in y. fatter
disease. Dysentery
& putrid dysenteries
time y. Water of y.
covered
filled with y. putrescent
entirely by y. slime of y.
off y. fructus acidi dulc
2 y. manner of operation
con. Diseases by mis
lated y. Dentition & ch
from a disease here, & d
ceremony with generally
exhalation
testines produced fro
found to precipitate
in y. body & it would be
with them in order
We are
now to enquire
It is very important
y. mass of blood from
before the can be enco
Bilious
to some check if not
they have either y. one
derivatives, but then by

in this Country furnished us w. a fruit y. is far superior to y. Grape or indeed any other for y. purpose. This is y. Water Melon q. by y. copious fruit Juice it contains is y. fittest to correct & wash of y. putrid Acrimony wh. causing y. disease. Hasselquist in his Travels to y. Egypt tells us y. putrid fever & putrid dysenteries are y. very common diseases in y. country, about y. time y. Waters of y. Nile subside & leave y. whole country one continued marsh covered w. y. putrescent veg. & anl. matter & y. y. Inhabitants trust almost entirely to y. Juice of y. Water melon for y. cure of y. disease. When I treated of y. fruitus acidi dulces I had occasion to mention y. use in this disease & y. manner of operation. I then told you y. they would indeed often occasion Diarrhoeas by wiping w. y. bile & forming a combination y. stimulating y. Intestines & causing y. freq. evacuation. But y. dysentery differs widely from a Diarrhoea, & I imagine y. it is always owing to putrescent acrimony either generated in y. body or taken into y. body as putrescent exhalations. — The fossile acids have act y. same effects in y. Intestines as y. vegs. thou produced fm, & do not prove purgative. Out of y. body they are found to precipitate y. bile, perhaps they may have a similar effect in y. body, & it would be well worth a persons while to make some exps w. them in order to ascertain y. real effects. —

We are next to enquire whether acids have any effects on y. blood. I think it is very ~~[illegible]~~ improbable y. they can act as acids in y. Lacteals & y. mass of blood, from y. dilution they must necessarily undergo before they can be incorporated w. the humours. They might be supposed at least to ~~[illegible]~~ check if not entirely cure y. Scurvy, but it does not appear y. they have either y. one or y. other effect. They will indeed act as purgatives, ~~but then~~ by encreasing y. acidity in y. prima via & thus

proceeding alkalinous fo
it ~~[illegible]~~ y. humors a
in fermentation. It has b
y. infusion in w. y. blood f
this is a very improbab
reason they say y. they
in y. stomach & intestines
fine w. y. blood is
manifest power in ch
establishes fact that they
organs of excretion where
there in y. same mechan
kidneys to prove diuretic
prove diaphoretic & secre
y. they either have y. effe
acids are said to irritate
make us cautious how
cases attend a cough is b

Chapter

We may divide acids into
base constituents in y. drink
ed in y. stomach via a
converted into fluids
hyle & blood by y. organs
are adapted for y. cure of
a thin effect y. artificial
to y. diff. degrees of acidity

preventing alkalescency from taking place; but then they will not cure it after
~~the case~~ y. humours are once in this state. They have been recommended
Hemorhages. It has been supposed that they act ~~here~~ in y. case on y. orifices of
vessels from w. y. blood flows, & have y. power of coagulating this; but
is a very improbable opinion, & it is much more consistent w.
reason to say y. they exert their refrigerant, sedative & astringent effects
y. stomach & primæ viæ, w. is by sympathy communicated to y. vessels
n w. y. blood issues. Tho we deny y. they have any
anifest power in changing y. mass of blood, yet it is a well
stablished fact that they are taken up ~~& carried~~ by y. lacteals to y.
ans of secretion where they are again collected & stimulated there. And
s in y. same manner as other saline cathartics they stimulate y.
dneys & prove diuretic; on y. same foundation they may also
ove diaphoretic & sudorific, but from y. manner of operation it appears
they rather have y. effect in consequence of y. effects on y. primæ viæ.
ds are said to irritate y. bronchia & promote a cough, this should
ke us cautious how we employ them in hæmoptoe & other
s where a cough is hurtful. The muriatic acid in flames issues.

Particular acids.

may divide acids into y. native & artificial. The native acids of w. we
e instances in y. lime, y. lemon & other acid fruits, have y. same effects
in y. primæ viæ as y. artificial acids; but they are besides fit to
converted into succum & sanguinem, or they may be assimilated into
e blood by y. organs of digestion & chylification, on w. acct. they
adapted for y. cure of y. scurvy, for w. disease we freely employ them;
this effect y. artificial acid will not have. Native acids differ according
y. diff. degrees of acidity, & as they are more or less acrid.

Ofy. Muriatic acid
acid of Vegetables; it
agree in qualities
way: acid. This is of
easily overcome by
approaches never
therefore
in Tartar, of which
We must
we would also for the
owing to y. oil
the acts in promoting
by producing antiseptic
ally. Dig. effects
Elegant, a Man of
particularly
medicine by y. treatise
immediately applied
years for some time
could cause very distinct
is now in a manner
written but y. of a
given in a very
to take y. same drams
y. same advantages
siderable

siderable effects in y. Vegetable
times but somewhat for
not always to give it

y. Artificial acids y. of Wine approaches nearest in qualities to y. native
d of Vegetables; it is also partly convertible into our fluids. The other acids
e in qualities w. one another, if we except perhaps y. ~~of vinegar~~ artificial
acid. This is of two kinds y. fermented & distilled: y. last is not so
ily overcome by y. assimilatory powers in our system as y. former, & ~~upon~~
aches nearer, ~~&~~ to y. fossile acids. We have an instance of y. distilled acid
Tar water, & whose medical virtues seem to depend entirely on y. acid it contains.
& might
ould also for theory or a priori conclude y. part of its virtues were
y to y. oil w. Tar contains, but y. is not confirmed by practice. Tar wa
ts by promoting all y. various functions of our fluids & in some cases
roving entire cure. ~~It~~ And for these virtues we may account for
diff. effects w. are ascribed to it. The late Dr. Berkley, Bishop of
, a Man of very great ingenuity & who has obtained great fame by his writings,
ticularly those in metaphysics, first introduced y. use of Tar water into
ice by y. treatise he published on y. virtues of it. It was then
ediately applied in every ~~intenate~~ disease & w. various success. It
for some time indeed looked upon as a universal panacea, y.
d cure every distemper. However it soon came into disrepute &
ow w. a manner entirely neglected. It is reality possess as other
tues but y. of a veg. acid, diluted in a very great quantity of ∇
er in a very disagreeable form. If we could persuade our patients
ke y. same draughts of ∇ w. any agreeable acid we might expect
same advantages from it, & these ~~might~~ would indeed often be very con
rable. The fossile acids are much stronger & have more con
rable effects in y. system than y. former. The muriatic acid has at all
s been famous for promoting appetite & assisting digestion. It is
dangerous to give it pure, unless diluted w. a very great quantity of ∇

it is therefore but to
be proximate. T
but the nitric acid
The Nitric acid is y. o
indicated & indeed it
requisite y. use of acid
any of y. things in com
bition. The ni
practice but y. is
it is as safe as any
Nitrum Nitratum,
The Sedative Salt of Pot
extraordinary virtues
been just stated thro
y. one or two instances
ceiving to other med. y. h
all it is y. of being
been well established yet.
medicine, as it is only
upon prej. opts entitled
of any consideration. If
coming to y. oil joined to
ceive & indeed it is very
then an y. particular an
consider some general he
The Nitric acid are y. only
Nitre fusion is prohibited

is therefore but to join it w.th a certain quantity of ~~some~~ alkali, so as y.t y. acid however shall predominate. Hoffman tells y. y. R. aperitive Mabii is nothing but Muriatic acid & alkali, reddened by y. addition of some rosin. Nitric acid is y. one w.ch we generally make use of when fixed acids are indicated; & indeed it may be employed w.th perhaps in all those cases y. use y. use of acids. It is much supposed to possess some advantages above of y. others in cases of hæmorhage; but y. is no more than supposition. The nitrous acid is generally excluded entirely from our practice, but y. is merely from prejudice, for if it is equally dilute it is as safe as any of y. others. Boerhave made use of it in his Lum Nitratum, w.ch is a nitrous amoniac in w.ch y. acid prevails. Sedative Salt of Homberg has been recommended as a medicine of extraordinary virtues, but the trials made of it have by no means been just. I had thought once y. I had seen good effects in y. Chincough in one or two instances, but I afterwards found y. these effects were owing to other med.s y. had been joined w.th it. If it has any virtues at all it is y. of being gently & weakly sedative; but even this has not been well established yet. The acid of Amber has been freely used in medicine, tho it is only of late y. we have discovered it to be an acid. Perhaps experts instituted to discover its real virtues, it appears to possess none of any consideration. If there is any advantage to obtained from it, it is owing to y. oil joined to our Sal. Succini, for hitherto it has never been used alone & indeed it is very difficult to get it so.

Are y. particular antalkalines y. are made use of, we shall next consider some general heads of substances y. may be employed for y. purpose. Nutrientia are y. only proper antalkalines y. can be used in y. scurvy. Putrefaction is promoted by every thing y. weakens y. solids & therefore

Astringents are also
an acc astringen
some potentiated an
y. deliciou by being c
from thing be conside

Cur

y. fermentation in
y gave you Ste
Antiseptics
several tendencies of y.
as could a y. poisonous
who deserve our attenti
have particularly in y.
I shall therefore offer y
every circumstance of wo
deceptive, as in reality exp
formerly protestation
y discover our thanks
he in very pr for having
a beginning then a fe
2 addition no agents are
repeated in diff. views &
of some use & he might
cannot extract that agen
st complex a power fall
y. this has an absorbent
mistakes in other cutane
caution, &c as it is a ome

Astringents are also found useful in ye Scurvy, especially those in wch there is
a acid & astringency combined. Deffulients may perhaps also be in
me particular cases employed to cover ye Alkaline acrimony: And
Bulbia by being liable to ye acid fermentation in ye stomach may
on this be considered as antalkalines.

Our next general head of Meds are those wch hinder
fermentation in ye stomach & are called in ye Catalogue wch
I gave you Antisigynica & are generally known by ye Name of
Antiseptics — ~~they~~ under ye comprehended such meds as obviate ye
eral tendencies of ye system to acrimony: & obviate ye vinous & acetous
well as ye putrefactive processes — The only Writers on ye subject
deserve our attention are Dr. Pringle & Dr Macbride of Dublin. You
particularly in ye former every thing ye I could say on ye subject
all therefore refer you to him. You will by perusing him see ye
substances ye were 30 years ago looked upon as powerful anti
tics, are in reality septic; & again many ye have been supposed to
more putrefaction have a contrary tendency. Dr. Pringle claims
deserves our thanks for what he has done on ye subject; but still
is very far ~~that not~~ from having exhausted ye subject, & what he has done is rather
beginning than a finished performance. His experts require confirmation
addition: no experts are absolutely to be received as facts untill they are
called wch diff. views & by diff. hands. He has certainly been guilty
some errors, & he might have committed others for what we know. We
and ey trust these experts wch he made wch common salt, because he did
employ a pure salt. He also supposes, according to ye old opinion
this has an absorbent earth for its basis; & he is guilty of ye same
stakes in other substances. Hence we should receive his doctrine wch
tion, & as it is a matter of such great importance in physick

every person should make expts & enquiries w.th a view to satisfy himself about y.e real matters of fact. We should chiefly have two questions in view. 1. Whether putrefaction is so common a cause of disease as has been imagined. & 2.dly Whether antiseptic substances can be introduced in such quantities & in such a manner into y.e system & to expect y.e antiseptic quality in y.e common mass of Blood

of phlegmon, & in our practice we generally give Camphire in all
nal inflammations & seemingly w.th equal success, sometimes it
ven very well at other it fails. And In rheumatic affections, w.ch af
ect nearest to y.e phlegmon, we sometimes find Camphire of
ticular use. If then y.e distinction is so difficult between ery
al phlegmons & ery repulatory affection, how much more
ult it be so in internal affections. — There are very few
tors who take notice of internal erysipelas; you have
ever one case in Lettsom, & it will be well worth your while
mult him upon it, as these cases are extremely rare. If we
to distinguish between y.e two I think we must confine
phlegmon to y.e cellular membrane below y.e Skin, & say y.e
ysipelas is an affection of y.e rete mucosum. Hoffman in his
ke on Camphire also gives us many Instances of y.e nervous fe
being cured by this medicine, & indeed he has also some
critical inflammatory nature. We however seldom employ
in disease of the latter kind. — Hoffman also & many
Writers recomend y.e medicine strongly in hemorrhages of
kinds, if it be given d. Ffo for a few. It is besides recomend
obstructions of y.e Menses, w.ch indeed would seem to contradict
use in y.e former disease. If But we know y.e y.e Menses are
ten obstructed by spasms & spasmodic affection, Camphire the
by taking off them may prove a useful emenagogue
Hoffman who tho it must be confessed is rather partial in favour
this remedy, recomends in every stage of y.e Lues venerea &
n in a Gonorrhoea virulenta as y.e most effectual remedy. He
not indeed seem in this case to speak from his own experience
therefore we may have some reason to doubt of its use in

this case. If it is found to be serviceable in inflammatory diseases it may also be so in a Clap, w.h in its first stage, & considered merely as a topical inflammation of y.e Glans of y.e penis. It has been asserted by many Authors y.t Camphire is a strong antivenereal & weakens y.e organs of generation. This is confirmed by ~~some~~ experience of some, but contradicted again by y.e of others. It is no easy matter to either positively to deny or affirm it. If it is found to allay inflammation, to stop hæmorrhages & to prove a powerful sedative to y.e System in general, it may certainly have y.e effect of weakening these organs. This leads us to consider its use in y.e disease where an inordinate venereal stimulus produces nocturnal pollutions or emissions of y.e Semen w.out erection. The cure is extremely difficult as there is a weakness of y.e whole nervous System takes place, & it often attends those y.t are very violently affected w.h a hypochondriacism. This ~~dis~~ symptom has sometimes been attempted to be removed by opium, & it sometimes has y.e effect of taking off y.e habit for a time, but then it generally returns w.h redoubled violence, as opium in y.e long run aggravates y.e cause of y.e disease. I have known Camphire tried for it & w.h very good effects. It must be given at bed time as an anodyne, & Ale beats should be ordered y.e next day. When any y.e particular diseases for w.h Camphire has been recommended, we shall next proceed to speak of y.e dose & best manner of giving it

This & ye other Gums may be prepared in diff. manners for ye purpose of Medicine: they yield ye Virtues to Water in a. & better to Spirits. But ye best method perhaps is to give them in substance. It is difficult to assign ye proper dose, not only on acct. of ye diff. effects on diff. persons, but also for ye strength being varied according to ye time they have been kept. I order them for grown Girls, & I have known Zij of Assafoetida given twice in 24 hours without any sensible effect, yet this does not deny ye it may still be a good remedy: things of ye kind will sometimes happen in ye most efficacious remedies, & may be owing to ye Impurities & age of ye Medicine or to ye peculiar constitution of ye patient.

The Substance wch. is next comes under our consideration is Camphire. This is a remedy ye deserves a particular attention, not only on acct. of ye general use ye is made of it, but also as it is a medicine ye may be attended either wth. very good or very bad consequences. It affords also a very striking instance of ye little progress yet made in medical science hitherto made; for tho it is so universally used most physicians seem to be but very little acquainted wth. its real virtues, & whilst some lay on very extraordinary encomiums upon it, others view it as a fallacious doubtful & insignificant remedy. It would be exceedingly tedious to enumerate ye various opinions ye have been formed of it & ye arguments wch. are brought in support of them. I shall think to have done my part if I can ascertain whether it acts, shall think to have done my part if I can ascertain whether it acts by ~~stimulating or~~ enriching or diminishing ye motion of ye system? Whether it dissolves ye blood as has been supposed? Whether it is a diaphoretic & how it proves so? And whether it will resist or correct ye putrescency of ye humours: And in ye last place in what Diseases it is generally employed & with what success. But

previous to this I shall in a few words give you y. natural history of it.
It is a substance sui generis or of a peculiar kind, has nothing resembling
it in Nature & cannot be imitated by Art. It bears some affinity
to y. essential oils of Vegetables; it is procured from Vegetables by de-
stillation w.th V; is of an acrid, highly penetrating odour & soluble in Alkohol: It
differs from y. essential oils in form & consistence; it cannot be decompos'd
by distillation nor does it separate as ess: oils do into oil, acid & earth,
but always rises in y. same form wt we have it in our shops.
It differs also by y. relation it bears to acids: for it may be united w.th
them without causing an effervescence; is again separated from them by y.
addition of V & then concretes in its natural form. And in y. last
place it concretes in a diff.t manner from every other substance. If
I indeed alledged y. essential oils will form a concrete somewhat like
it; but I find y. this is not y. case & ess: oils form regular
crystals. I give you these peculiarities w.out drawing any
conclusions from them; for I confess I do not know y.m that I
confess is not in my power. — The plant y. affords y. Camphire
grows spontaneously in y. East indies, where it is also cultivated for
y. purpose. It is a species of laurus, & of y. same genus w.th y. Sassafras,
of y. country & our wild Bayberries. Camphire approaches com-
bined by y. latter in its taste & odour, & we may therefore fm analogy
include it has somewhat similar virtues. But this I am not are
much better determined by experience. I shall next proceed to
investigate these fm y. ends instituted for this purpose. Cam-
phire is of a volatile, penetrating & inflammable nature; a strong
smell & acrid taste: it produces heat in y. fauces, & also excites
a sensation of y. same kind in y. stomach. From these qualities
it has been tried to stimulate y. parts to w.h it is immediately applied;

then not only possible
for y. [illegible] to if it
body [illegible] meaningless [illegible]
if be applied to y. [illegible]
tion; [illegible] to fast the [illegible]
contiguous is if it [illegible]
it bring [illegible] order [illegible]
contiguous this it has [illegible]
[illegible] allowed & be [illegible]
then [illegible] conceiving y. [illegible]
of [illegible] Doctor Brown says
an [illegible] physician
Hoffmann & Stoechen [illegible]
tice [illegible] appear to have
internally; 10. they accord
found [illegible] have [illegible]
long & [illegible] stimulating [illegible]
[illegible] distribution y. [illegible]
manifestly [illegible] a [illegible]
only [illegible] but only [illegible]
[illegible] or symptoms
[illegible] to the [illegible]
[illegible] in his [illegible]
[illegible] Hoffmann
They [illegible] y. if [illegible] spasm [illegible]
by [illegible] emphasis this [illegible]
but if it is powerful [illegible]
by y. [illegible] pass [illegible]

this is not only probable, but it is moreover confirmed by expts made for y. purpose; for if it is applied to any of y. sensible parts of our body it manifestly occasions an irritation there. Thus for instance if it be applied to y. tunica adnata of y. eye it produces an inflamma-tion; if to ye part the where the muscles are bow or when y. skin or cuticle is off it occasions pain, & if injected into y. urethra it brings on an ardor urine. But if it is applied to y. sound & entire skin it has no manifest effects on it; if y. part is rendered more inflamed & has that become more irritable & sensible, it will then by encreasing y. irritation aggravate y. disease. From these effects of Camphor many very celebrated Physicians have concluded y. it proves an universal stimulus to y. System, amongst these are Stahl, Boerhave, Vogel & Storche. Others again affirm y. from y. practice it appears to have a refrigerant & sedative power when given internally; tho. they account for it in a diff.t manner from those it is found to have when externally applied. They allow y. it is of a heating & stimulating nature & tho, say they, it sometimes takes off y. disease, diminishes y. febrile heat, lessens y. velocity of y. blood & thus manifestly has a refrigerating power, yet they that it has not this natural, but only proves so occasionally, by taking off a particular symptom or symptoms or by its peculiar action taking off y. cause to wh. the disease was owing. Of this opinion are Morbius in his treatise on Camphor & Wright in his book on nervous disorders. Hoffman & Cullen have a diff.t opinion from y. former. They say y. if y. spasm in a fever is so strong y. it cannot be overcome by y. Camphor, this remains in y. body & then proves a stimulus; but if it is powerful enough to overcome y. spasm it finds an exit by y. cutaneous pores, removes y. disease & then proves refrigerating &

Secretaries, & when upon
a certain Statute books
deliberations & consultations
most common opinions
then all were in Stepney
either in royalty or common
additions such others as
shall be drawn out
written of Lancaster their
of Anatomy at Edinburgh
of Physicians extraordinary
of ~~one~~ divinity; and
contradictions strange & fabulous
strangeness on y. subject:
many opinions y. he had
Lancashire, Scotch & Irish
by it
into a very deep where in
others in medicine; some
fever Aristotle; some
it brought on epileptic fits
given in cases of
practice as those y.
institution might
Stephens in his Dissertation
Effects of Camphor displayed
not persuade y. warmth or
neither nay y. colour of y.

Sedative. — Others again say that it is entirely of a refrigerating & sedative Nature because when it is given to patients it will take off delirium & convulsions, & dispose ye. person to sleep. These are ye. most common opinions of ye. nature of this medecine; but I shall pass them all over in silence, & give you some expts. ye. were instituted either by myself or communicated to me by some of my friends, & by adding such others as occur in Writers of candour & ingenuity, we shall then draw our conclusions & endeavour to ascertain ye. real virtues of ~~Camph.~~ this celebrated medecine. — Dr. Monro, Professor of Anatomy at Edinburgh made some expts. w.th it on Dogs; he found, by applying ye. Camphor externally ~~& also~~ or giving it internally it brought on torpor, ~~also~~ & sense diminished ye. sensations, lessened ye. action of ye. heart & made its contractions stronger & fuller. —

Menghinus in ye. Phil: Trans: of Bologna gives us ye. result of a great many expts. ye. he had made w.th Camphor on diff.t kinds of animals: on Quadrupeds, Birds & fishes. He ~~says he~~ observed ye. some were thrown into a very deep & others into a placid sleep; some were seized w.th tremors, others w.th madness; some it vomited, others it purged, in many it proved diuretic; some w.t seized w.th hiccups others w.th anxiety; in many it brought on epileptic fits; and to most animals it proved a poison if given in suff.t quantity. But these expts are not so much to our purpose as those ye. have been made on ~~men~~ our fellow Creatures, I shall therefore rapt enumerate some of them. —

Hoffman in his Dissertation on Camphor says that he frequently gave ye. or 3ss of Camphor dissolved in ozs. of Wine to a person in health; ye. he did not perceive ye. warmth or heat of ye. body encreased; nor ye. pulse quickened, neither was ye. colour of ye. Urine changed or thirst occasioned; whereas fifty

mulating med. will either produce one or all of these symptoms. — He also gives in case when 3ij of Camphor were combined w.th some Linn oil, in a mixture w.ch was swallowed by a person labouring under a ~~spasmodic~~ hypochondriac ~~often~~ attended w.th a spasmodic apoplexy: he had scarce taken it before y.e Vertigo was considerably encreased, y.e extremities grew cold, his countenance grew pale like y.e of a dead person, y.e arteries beat extremely small & languid, ~~to these succeeded~~ an oppression & anxiety at y.e precordia & a cold sweat of y.e head; a disturbed imagination & a great propensity to sleep. We have a similar case in Pouteau a late french writer of character. The Woman was most miserably afflicted w.th cholic pains; for w.ch he gave her gr 60 of Camphire w.in ye an hour; as soon as ~~the~~ y.e pains suffered her to be dressed she was put into bed & covered close. Not long after this y.e pains ceased entirely & there succeeded a coldness & paleness of y.e whole body w.th out tremor: She seemed to be giving up y.e Ghost: the bystanders endeavoured to warm her by giving her a few spoonfuls of french Wine covering her body w.th warm ~~woollen~~ linnen. The cold lasted for near an hour & was gradually succeeded by a natural heat & warmth, w.th out any signs of sweat, & she was entirely cured — I shall now give you some instances y.e fell under my own observation or were communicated to me by my friends —

A Gentleman took 30 grains of Camphor made up into Bolus w.th Conserve of Roses at 8 o'clock in y.e Morning; He felt no alteration either in his pulse or any part of his body untill 2 hours after when he was affected w.th nausea, vertigo in such a manner y.e he could not give his attention to any thing & there came on such a confusion of Ideas y.e he was not sui compos. About 12 o'clock he was seized w.th a violent straining to vomit, but brought

of nothing except a little bile mixed w.ch something resembling bile. He was entirely deprived of his strength, particularly in y. lower extremities & staggered when he attempted to walk. During his vomiting y. pulse became small, languid, & much quicker than natural. He encouraged y. vomiting by drinking warm ▽, but w.ch out perceiving any ease from it, or throwing up any of y. Camphor. He then eat 2 or 3 sweet oranges, & when y. vomiting ceased he went to bed & fell into a profound sleep; during this his pulse fell rather under its natural standard & became very full. His sleep continued for 3 or 4 hours, & when he awaked he found himself quite well except some lassitude w.ch was owing to y. vomiting.

This same person some days after took grs. of Camphor every ½ hour untill he had taken 60 grains; but it was not in this case attended w.ch all y. same effects as in y. former; & seemed not to circulate y. system at all, but rather prove sedative for y. beginning. A Gentleman at Edinburgh made y. following appl. on himself w.ch he relates in this manner. He took, says he, two scruples of Camphor formed into a bolus w.ch some syrup of roses. He had before applied Farenheit's thermometer to the pit of my stomach, in order to ascertain what degree of heat my body was then in. He kept it there for 5 minutes, in w.ch time y. Q rose from 96 to 91. y. is 69 degrees: my pulse at y. same time beat 77 in a minute. After ten minutes after he had swallowed y. bolus the thermometer rose 18 dg: in y. 5 minutes, & y. pulse was y. same as before. Three quarters of an hour after this he again applied y. thermometer, but y. heat was exactly y. same; y. pulse beat 10 strokes less in a minute, now then it did before. A ¼ of an hour after this again my head was affected w.ch a dizziness, w.ch increased to such a degree y. he could hardly cross y. room. He opened y. Windows & put my head out hoping y. fresh air would bring some relief; but y. objects in y. street appeared only in a confused manner, & it with w.ch much ado y. he could keep himself from falling. He then laid down on

a bed & underwrote to
as could & singular as
over 3 or 4 days, but
upon it. Left y. bed &
good time before. Bed & fo
many days were the
bed, & again had occas
I know not. It grew pitch
before only. They co
up in bed & underwrote
first & left bottle, fetched a
came in my way that
threw myself back to y. bed
sincere & ~~any thing~~ that
& ~~mean~~ explaining & co
graphic in my Brother
Jesus made me great pla
& wrote it to me as if
but any thing of what had
did the other person hav
y. I been in a fit
& ~~should~~ would ab
minutes I got up out of
try whether they understood
I. Then myself on y. flo
it. I upon bed & fe
time. Soon after y.
a fright y. room on
bed in a minute y.

a bed & endeavoured to amuse myself w.th a book. But every thing appeared as confused & irregular as when I looked into y.e first. I made shift to run over two or 3 pages, but could not commit even y.e shortest sentence to memory. Upon this I left y.e bed & tried whether I could walk w.th more steadiness now than before. But I found y.t my judgment was quite disturbed & every thing wore then before. I therefore betook myself again to bed, & again had recourse to y.e book. But what became of me then I know not. A young gentleman who happened to be present afterwards informed me that I lay composed & quiet for a short time: that I then sat up in bed & endeavoured to vomit, but could not bring up any thing; that I look terrible, frothed at y.e mouth & endeavoured to tear every thing y.t came in my way; that under strong convulsions & w.th miserable cries I threw myself back on y.e bed, & lay for y.e space of an hour I was insensible of what passed or was doing about me. After these dreadful almost fatal sufferings I came again to myself & y.e first person y.t I distinguished was my Brother Ed. Fallen who had been first for & whose presence gave me great pleasure. But every thing now appeared new & wonderful to me as if I had but just then come to life. I could not recollect any thing of what had passed, nor even y.t I had taken y.e Camphor, nor did any other person know y.t I had taken it. It was therefore thought y.t I had been in a fit of y.e apoplexy & bleeding was ordered; but I absolutely would not let it be done. My pulse now beat 100 in a minute. I got up out of bed & demanded some volatile salts to try whether they would not relieve me; but as I found no effect from them I threw myself on y.e floor & found some benefit from y.e coldness of it: I thereupon had cold water poured on my head & hands; by w.ch I also got some relief. Soon after y.e Dr Monro Senior came in & he by chance found a paper in y.e room on w.ch y.e word Camphor had been wrote. The arteries at y.e time beat 100 in a minute, y.e pulse well full & equal. Dr Monro ordered me to

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From
y. dis
Respecting y. head & face,

to drink large draughts of warm Water ~~y I might~~ in order to excite vo-
miting. It has this effect & tho it was now upwards of 4 hours since I had
taken y Camphor, I still vomited up a considerable quantity y. had remained
in y stomach all y. time. I now also first recollected y. I had taken Camphor.
I still I could not tell how or why I took it. I took y. three Oranges but
found no benefit from them. After y. vomiting was over I ~~got~~ pegued a violent head
ach, but my judgement was less impaired than before. About an hour or
two after I took some Tea w. some Juice of lemons & when y. Physicians
soon after y. returned y they found y. pulse down at 80. The thermometer
was again held to y. pit of y. stomach & y. mercury in it rose two degrees
above y. natural heat of y. body. The headach continued all y. evening &
my thoughts were still dissipated & incoherent. About 8 or 9 in y Evening I
took some broth & went to ~~sleep~~ bed. My sleep was placid, respecting
& not interrupted, & lasted untill late next morning, when I waked en-
tirely free from y. headach, but still somewhat confused. I had a sensa-
tion in y morning, & for two days after this I felt myself sick & stiff
over y whole body. And for four days my head was still somewhat confused.
In this case you see y. pulse was quickened & y. heat of y. body increased;
this however did not happen in y. beginning but after y Camphor had been
in y stomach for a considerable time. The symptoms therefore seem to have
rather been owing to y. Nausea & other symptoms y. were brought on from
y Camphor being given in too large a dose. It seems to be rather of a
cooling nature, & at least it does not increase y. natural heat of y. body.
Whether it has y. effect of lessening y. heat in fevers; of taking off Delirium;
of relieving spasmodic affections; take off convulsions, lessen y. frequency
of y. pulse & circulation; & whether it has always this effect in every disease
& in every stage of y. disease must be determined only by fresh experiments. When
I come to speak of its use in Diseases I shall then ~~slight~~ touch on this again.
From y. case above related it is also evident y. Camphor does not hinder
y. respiration or make it difficult; nor does it occasion a fulness in y
vessels of y. head & face; neither does it accumulate y. blood in y. larger

useful; neither does it leave ye. System more irritable than it was before after
its effects have ceased. But all these disadvantages attend ye. use of Opium
& other sedatives, as it is then neither attended w.th ye. heating effects of
Stimulants, nor w.th ye. ~~sedative~~ disadvantages ye. attend ye. use of sedatives: as
it moreover differs in its manner of operation from either class, we justly
conclude ye. it belongs to neither ye. one or ye. other; & must therefore
refer it to a distinct head w.h I have called Antispasmodics. If it is this & few
other remedies ye. have made it necessary to collect them into a distinct
& separate head; the, as I told you before Stimulants & sedatives do also
frequently prove antispasmodic. Having thus established ye. primary virtues
& effects of Camphire on ye human body, & we shall next proceed & enquire
into ye. other opinions about it & first: Whether it does dissolve ye. blood
& thus occasion a diaphoresis. This is ye. opinion of ye. greater part
of Physicians both ancient & modern among them are Haller, Mauchart,
Geller & Hoffman. The latter says he observed ye. by ye. freq.t & long continued
use of this medicine ye. blood w.h it was thick & viscid before became much
thinner & more fluid. He also observed ye. fat people & those who were rather
of a phlegmatic constitution, became more lean by it: & drinking acq.t says
he, ye. ye. is an excellent remedy to attenuate & dissolve ye. thick &
degenerate humours. But if we consider how ~~little~~ small a quantity of it
is taken internally in diseases; what changes it must undergo before it can
be mixed w.h ye. humours & can act upon them, & in ye. last place ~~it~~
~~what~~ ye. large quantity of fluids ~~it~~ w.h it must be mixed, we may
readily conclude ye. it can by no means act on ye. humours, nor dissolve
& attenuate them. We can also explain this effect w.h Hoffman
says it has on ye. fluids by its action on ye. solids. For Camphire is
somewhat of a sedative nature; & as all med.s of ye. kind ~~have ye~~ debilitate
ye. system, so Camphire taken for a long time will weaken ye. motions
of ye. habit, relax ye. habit, ~~debilitate~~ impair ye. organs of digestion &
thus render those of chylification less fit for their office, at length ye

disease of y. solid parts will be communicated to y. fluids & this may
become too thin & watery, & dissolved.

diaphoretic virtues of Camphire are established by long experience & y.
testimony of every writer on y. subject. Some say it ~~to~~ is most effectual
when it is combined w. opium for y. purpose. They say that y.
virtue of Camphire is owing to its penetrating nature; by w. it is readily
gives at all y. vessels of y. system & by stimulating these it proves diapho-
retic. The penetrating quality of Camphire ~~they~~ are proved by y. following experi-
very ingenious Dr. Hales tells us in his statical essays y. he by means
a pipe injected a very strong solution of Camphire in ℞ into an Apple
w. bears y. golden renet. The tree seemed to imbibe it very greedily
& after 3 hours it was communicated to its most intimate & remote
parts, when half of the tree died entirely. The smell of y. Camphire was
very perceptible in y. stem & branches of y. dead; tho it could not be perceived in y. fruit
or any part of it. The very accurate & learned Dr. Monro, my former
teacher, put a powdered camphor to y. Legs of a frog, & left it there until
it deprived y. animal of Life, when he cut y. body of it into small
pieces. These he afterwards put into ℞ & spt. of Wine & found y. y.
Ether & the wine impregnated w. y. odour of Camphire. We have also
a Instance of a similar nature recorded in y. Transactions of Breslau,
where there is an acct. of y. epidemic diseases y. raged in y. country dur-
ing 1760. A Girl had Scorbutic blotches, & besides other symptoms & incon-
veniencies accompanying y. disease y. hands were very red & from w.
there issued out red blaze y. extended to y. arm for w. She was ordered pow-
der of Nitre & Camphire & also y. medicine dissolved in Oil of Almonds;
the symptoms by y. became in a short time mitigated; y. gangrenous
parts separated from y. healthy: & what was very strange y. fecal w. broke
out from y. use of Camphire, smelled very strong of it. These arguments
certainly need convince us of y. penetrating quality of Camphire; but
they not ~~prove~~ show y. ~~the~~ it ~~[illegible]~~ proves diaphoretic by its stimulating y. system

system in general, as some have imagined, now it is owing, as others have con-
ceived to a peculiar stimulus affecting only ye exhaling Vessels. For by y^e
facts above related it was evident that when Camphire was given in a proper
dose it never stimulated ye body. If we allow ye it is owing to a specific Sti-
mulus, affecting only ye exhaling Vessels, what are we thence to conclude
the kind of ye stimulus? Why does it not also affect ye heart & stimulate this to
more frequent contraction? For it certainly cannot arrive at ye exhaling vessels,
but having been previously carried to ye heart. This way of reasoning
is trifling & quite insufficient to account for ye effects of ye medicine. &
if we consider what has been said before of ye antispasmodic & relaxing
virtues of Camphire, it will sufficiently account for ye diaphoretic effects
of ~~same this medicine it~~ When I spoke of Sedatives I told you y^e
in general they exerted ye powers first on ye most remote parts of ye Ner-
vous, & therefore sooner on ye Vessels of ye Skin y^n on ye heart. The antispas-
modics have ye same effect & by relaxing ye Vessels on ye surface, &c. out
diminishing or quickening ye action of ye heart, we may readily see how
they prove diaphoretic & occasion ye person to sweat. but first
quickning ye circulation, as Stimulants do. Besides as fevers are generally
accompanied wth spasmodic affections of ye Nervous & sanguiferous systems, com-
phire by its antispasmodic & relaxing virtue takes off that one ye whole
body & thus seems to promote the salutary operation of sweat. At least
this appears to me to be ye case. — And thus it may be of use in cases
where antispasmodics are required to produce this effect; but if stimu-
lants are necessary for promoting a sweat, or if we want to accele-
rate ye motion of ye blood, this remedy is not ye proper one. — Hup-
ham says ye nothing promotes sweat more certain than Camphire, &
ye it has this advantage over many others, ye it does not heat ye body.
Some of ye Ancients & many great Men of ye Modern have thought ye Cam-
phire has ye power of hinding ye putrefaction of ye blood & humours of
our body, & ye it was by ye virtue ye it proved serviceable in y^e
Pestilence for wch it is recommended.

In

~~Dr Gronovius~~ The following facts & experts will serve to illustrate y. matter.
Ancients on observing y. Camphire had a manifest power of preserving y.
putrefaction of dead bodies, & ~~finding~~ it useful in malignant & putrid
fevers, they rightly conjectured y. it might also have y. power of preventing
putrefaction in y. living body. Gronovius in his Thesis on Camphor
tells us y. Peter Della Valle a roman nobleman had brought his wife
who had died in Asia uncorrupted to Rome, by ~~placing y. body~~
~~into a coffin~~ filling ~~in~~ y. coffin into wh. y. Corpse was put wh. Camphire.
learned Dr. Pringle who by his expts opened a new field for physicians to
labour in also made some expts wh. Camphire by wh. he found y. two grains
of Camphire would keep meat better from corruption y. 60 gr. of common
salt, without allowing for y. particles y. exhaled & evaporated; but if we are
to take in he shows by his calculation y. it is a 300 to 1 to y. common
salt for preserving animal substances from putrefaction. He made y. same
expts on bile & wh. y. same success. But when he ~~made them~~ tried
it on y serum of y. blood, he found y. virtue a fourth part weaker. These
expts were not however often enough repeated to draw any certain con-
clusions from them, & we must have them confirmed before we affirm
y. Camphire will resist y. putrefaction in our body, & y. it is good &
safe in putrid diseases. Expts of y. same purport & kind were
made by a Gentleman when I was at Edinburgh, & wh. y. same success.
Throw these ~~expts~~ it appears y. Camphire has a considerable power in
resisting putrefaction both in living & dead bodies. And if any remedy does
this by mixing wh. y. humours, Camphire stands a better chance for
it than any other. But this is not clear yet; & Meyhinius who has
made many expts wh. it seems justly to conclude y. to it ~~exerts~~ its power
ever as soon as it is taken into y. stomach, & before it could possibly have
been taken into y. blood. This is not only confirmed by what we observe
happens in y. operation of most meds. but more particularly by y. case
of y Gentleman wh. I related, & where it appeared y. great part of y. Cam-
phor was rejected again by vomiting 4 hours after it had been swallowed.

appears ~~[illegible]~~ therefore y. its chief action is on y. nerves of y. stomach from whence its effects are propagated over y. whole system, & therefore its effects in putrid diseases cannot be said to be owing to its antiseptic virtues. Besides tho it resists putrefaction yet it has no power of taking it off. This is illustrated by the following exp. A bit of putrid meat was laid into Lime water w. w. Camphire had been combined, but tho it was kept there for a considerable time, the putrefaction was not taken off by it. This may be sufficient w. regard to y. manner of operation of Camphire, its use in Medicine for y. cure of various diseases shall be y. subject of my next Lecture.

In my last Lecture I gave you y. Virtues of Camphire, y. appeared by Experiments instituted for y. investigation of them, & such as I afterwards may be depended upon; I shall next give you its use in Diseases as confirmed by y. experience of Authors of Note. Antispasmodics have been freely employed in y. hysteric disease & complaints of y. hypochondriac kind, & whether there are purely spasmodic, Camphire may be employed w. success. It has also been used in y. Mania & Dr. Skinner has given us several instances of in y. Phil. transactions of its use in these cases, when it was given at ℥ss for a dose. In these cases I make no doubt are just & well founded; but I must leave to you y. Madness may be owing to a variety of causes, & y. nor no one medicine is adapted for y. cure of all of them, & therefore it very freely happens y. we are not very happy in using it. It has also been recommended in y. Epilepsy w. is likewise a very difficult Disease to cure, & owing to a great variety of causes: Perhaps Camphire is not adapted to one case in 10 of this disease; it often has ever has been attended w. success, & tho it does not perhaps ever cure y. disease entirely it freely has y. effect of making them return much seldomer; & where y. disease is brought on by passions of y. mind, fear e.g. it sometimes makes an effectual cure. Camphire has been chiefly & generally used in fevers. I think it

ust appear evident to you y. it can only in these cases act as an
Diaphoretic. Some Practitioners confind it in every kind of fever,
whilst others confine its use to those of y. malignant kind. recommend
even in y. plague itself, in all putrid fevers & those y. are attended
with miliary & petechial eruptions. It is also frequently used in y. nervous
fevers, where y. Vis Vitæ is evidently sunk, & in these it is often
found of great service, & I imagine it would be attended w.
yet better effects if we were to give it in larger doses. Heuscher
gives a Thesis w. he calls y. Ignis ignis extinguendus recommends
medicine in fevers of all kinds but particularly in these
low fevers, & he appears to speak from experience & w. candour.
Poiteau, an Author for whom I entertain a good opinion &
who is Physician to a Hospital of lying in Women, tells us y.
all Women ~~are~~ under his care were at a particular season attacked
with an epidemic disease, w. came on w. violent colicky pains attended
with fever, y. appeared of y. inflamatory kind. those y. died he found on
dissection ~~probably~~ an inflamation of y. bowels extending to y.
Peritoneum, y. inner surface of w. appeared livid & gangrenous. In
this disease he gave Camphor dissolved in oil & mixed w. a syrup,
in y. quantity of 5 grains, of w. he gave 3 doses in ½ hour & another
half dose 5 hours after this, & so on to about 7 or 8 a day; by w. means
he effected a perfect cure. He also gives us y. rationale of his
practice in w. he distinguishes between a phlegmon & erysipelas,
in y. former he says we employ Camphire to no purpose, but
in y. latter it will be attended w. very good effects. He tells
us it is of great use in vernal pleurisies & peripneumonies, w. he
says are of y. erysipelatous kind, & y. it was from y. dissections of
the Women y. he conjectured this to be y. case, & was thus
led to order y. Camphire. It is however ~~but~~ very difficult to
make a proper distinction between y. erysipelas & a
pleurisy

From the effects & Virtues of Camphor now enumerated it evidently acts as an antispasmodic, & therefore in my own practice I never employ it in any other Intention & have frequently used it in the Nervous & Camp fever & with no small advantage. I seldom however in these Cases administer it without ye. addition of Tartar emetic when the State of the stomach & bowels will allow the combination. The usual dose is from 5 to 8 grains in a bolus to ~~for~~ Pos. to which ½th of a grain of Tartar emetic is added & repeated every 2 or 3 hours. In this manner I have frequently experienced very considerable effects from it particularly if it acted as a constant the gentle diaphoretic; but when it ~~it~~ was not attended with this effect it seldom proved useful & in general did not persist in giving it — upon the same principle tho a different disease I have often used it in the last stage of a Dysentery when the Patient was so reduced as not to allow even of the gentlest laxatives. In this case I generally make it into a Bolus with Theriaca or Mithridate & give it as before directed & I am confident of its having been attended with the happiest effects & in some cases where I had scarce any expectation of preserving the Patient. — ~~When~~ Camphor is ~~given~~ best administered in a Bolus & with this precaution that it should be reduced into a very fine Powder by ye. addition of a few drops of Spirit or oil; if it is not finely powdered it is apt to irritate the upper orifice of the Stomach & occasion a heat & disagreeable sensation in that organ —

Vegetables as Aloes. These Gums, as well as ye fœtid plants ye I have just treated of, have been used as Anthelmintic. Asafœtida has long been employed for ye purpose, & of late it is freely made use of to kill the Tænia. They also prove diuretic, but more particularly diaphoretic, & it is said ye Asafœtida excells ye other as a diaphoretic. From these qualities they may justly be looked upon as pectorals, not only as promoting ye secretion of mucus in ye lungs, but also probably by proving antispasmodic. Ammoniac is recommended as ye most powerful pectoral, tho it certainly ye weakest antispasmodic; it is however asserted by some ye Asafœtida equals this in pectoral virtues. These Gums have also been employed in fevers in ye same manner as Castor; & they may be useful in these cases, if we know ye proper time in wch stimulant antispasmodics should be given. For my part I should not choose to use them only in these cases, as their Stimulus is greater than their antispasmodic virtue. They have also been looked upon as emmenagogues, but they are only so far they shine into ye whole system. They have also been said to occasion a rarefaction of ye blood in ye same manner as Aloes. From ye contain strongest & most penetrating scent ye best antispasmodics whence imagine ye it is not without reason ye Asafœtida is preferred to ye rest & has in a manner supplanted them. You will find a very accurate & elegant description of ye plant wch produces ye Asafœtida, & ye manner of preparing it in Kæmpfers History of Japan. He says ye ⅌ of the fresh & just drawn Asafœtida gives a strong smell in blood of ye wch is brought into Europe. The romans used to liberally dose their plates wch Asafœtida & reckoned it a very high price for meats. This custom now prevails in China, & some great epicures in eating amongst us sometimes use it wch a basted

The most [illegible] class of [illegible]
ranked [illegible] along [illegible]
very [illegible] for they [illegible]
for y. [illegible] & lib was [illegible]
have been various opinions
been [illegible] y. they [illegible]
fluid, they [illegible] y. [illegible]
just, it still does by no [illegible]
be [illegible] for [illegible]
of our [illegible] blood, fluid, or [illegible]
has been said y. all y. fluid
exist in y. body of blood [illegible]
come [illegible]? Have we [illegible]
fluids, or w. [illegible]
of [illegible] y. [illegible]
y. other parts, [illegible]
a form [illegible] y. [illegible]
of blood [illegible] y. y. [illegible]
form [illegible] they are [illegible]
undergo [illegible] y. organ, [illegible]
no more [illegible]
process we will obtain
separate urine from [illegible]
seem probable we must
is not only very probable
ents [illegible] excrementa, [illegible]
they [illegible] even often [illegible]
promote their secretion

The next Class of remedies are y. Evacuants. I have ~~placed them under~~ in my Catalogue ranked them along w. y. med. y. act on y. fluids, tho perhaps not very justly, for they probably act on y. Solids, but then y. have y. fluids for y. object & it was for this reason y. I placed them here. There have been various opinions about y. manner of operation. 1. It has been supposed y. they act on y. mass of blood & by rendering y. more fluid, they promote y. secretions; but ~~their~~ granting y. y. opinion were just, it still does by no means explain how particular secretions may be encreased, for I have no idea of any medicine rendering a certain portion of our ~~fl~~ blood more fluid than y. other, in order to ~~have it expelled by~~ evacuate it. 2. It has been said y. all y. fluids evacuated by y. ~~secretion~~ excretions ~~or~~ previous exist in y. mass of blood in y. same form as they are evacuated, & y. some med. have a peculiar attraction to certain portions of our fluids, by w. they are determined in a larger proportion to y. organs of evacuation, & y. these organs are do no more but separate these from y. other parts, ~~in~~ this only serving as Strainers. But I told you in y. former Lecture y. ~~for~~ we could not discover more than three portions of blood, & y. y. secreted fluids did not exist in y. blood in y. same form as they are secreted, but acquire this ~~density~~ by y. process they undergo in y. organ. e.g. The Urine does not exist in y. blood, no more than ~~Rum is in~~ Sugar contains Rum, but by a particular process we will obtain a Spirit from this, & y. kidneys will separate Urine from blood. — As neither of these opinions then seem probable we must have recourse to another w. I think not only very probable but entirely consistent w. truth. This is. y. Evacuants are Stimulants, these stimulate y. organs of secretion & thus, ~~about~~ even after w. out being employed w. y. fluids at all will promote their secretion. —

If
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immediately applied to
an other advantage in
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they
they
they
however
stomach
in
observation
cause of the toothach

The same ~~hold~~ may be said of Mercury & y. other substances y. have always been looked upon as possessing a specific virtue in increasing y. evacuation of particular secretions. Stimulants in general may prove Evacuants by stimulating one or more of y. organs of secretion; but I am here only to speak of those y. are generally employed for this purpose & I shall begin w. y. Lachrima. There are such substances as are applied to y. inner membrane of y. nose producing a discharge of mucus accompanied w. a stimulus, & generally attended w. sneezing. N. Diseases ~~require indicate~~ in w. Evacuants are indicated, yield powerful to those y. are immediately applied to y. part affected: & it is on y. principle y. there is often advantage in Diseases of y. head. It happens indeed sometimes y. it is necessary y. evacuation should be very great, & y. ~~partial~~ partial application will not have y. effect, this is chiefly y. case when we intend to alter y. distribution of y. fluids to y. diff. parts of y. system: but this is only an exception to y. former rule, w. in general holds good. Sneezing ~~and pain~~ possesses two virtues by w. they prove serviceable in diseases of y. head: they in y. 1st place excite a general convulsive motion, w. we call sneezing, & 2dly they increase y. discharge of Mucus from y. nose. They were formerly very much employed in Medicine, but of late they are pretty neglected, as y. modern Physicians have not found y. they possess the Virtues y. are generally ascribed to them. They are however of service in rheumatic affections of y. head; & there are Instances of their not only ~~removing~~ giving a temporary relief in rheumatic headache, but, of curing y. disease entirely. It is a common observation y. persons not used to taking snuff will often be relieved & even cured of a toothach & other rheumatic affections on their first using it.

They are not only useful in
that the practitioner
of y. Lyc
dept to produce Bonafide
inflammation. We should
that they will often be
a recent inflammation; b
to a hepatic or overtaxed
pulling circulating fluid
leo. they give to y. practi
tive effect. on not in y. lar
in they brought on by
table: a Bilious at is also
natural, and you will fin
Sorbinis these effects a
hend.

These are
of cases sneezing & co
generally employed may be
under y. first head we
convulsive: under y. last
tis, hepatism. White
es y. most famous & also
commended in Diseases of
other and sorbinis are
st dangerous hemorrhages
in y. neighbouring parts.
y. Lis Water flag recen
tridate with blood a pulling of y.
y. only failed to respe

they are not only useful in these rheumatic affections, but in all chronic inflamations, eg. of ye. Eyes. Most Practitioners caution ye not to use Irrhines, as they are apt to produce Congestions in ye. vessels of ye. head, & thus encrease ye. inflamation. We should make a proper distinction here; & I allow that they will often be attended w. considerable disadvantages in a recent inflamation; but this ~~in~~ ~~often owing~~ disease is pretty owing to a lapsity or weakness of ye. Vessels, by wh. they are rendered incapable of resisting ye. circulatory fluid: irrhines will remove this by ye. ~~general~~ stimulus wh. they give to ye. parts. There are many diseases of ye. inflamatory nature ye. are not in ye. least suspected to be so: eg. an opacity of ye. cornea is pretty brought on by an inflamation, tho there is no redness perceptible: a Cataract is also sometimes in ye. beginning of an inflamatory nature; And you will find ~~author~~ cases in practical writers in wh. irrhines have effected a cure; especially if they were ~~very~~ strong & active enough. There are a great many substances ye. ~~power~~ have ye. virtue of causing sneezing & encreasing ye. discharge of mucus: those wh. are usually employed may be divided under two heads: ye. Mild & acrid: under ye. first head we may refer ye. Juice of ye. Beet, sugar, & ye. Solanum nodiflorum: under ye. last Acarum, Tobacco, Juice of ye. Root & native Water flag or iris, & Euphorbium: White Vitriol & Turbith mineral. The Turbith mineral is ye. most famous & also one of ye. strongest of these. It has been greatly recommended in Diseases of ye. Eyes: but we must observe ye. that ye. these & ye. other acrid irrhines are not only apt to produce violent inflamations & dangerous hemorrhages in ye. membrane of ye. nose; but also in ye. neighbouring parts. I have seen a few drops of ye. Juice of ye. Iris or Water flag occasion a violent sneezing & discharge of mucus tinged with blood, a swelling of ye. whole neck & head, wh. indurations of ye. cheek ye. only yielded to repeated bleedings; it had however ye. effect of curing

[illegible]

patient of y. toothach & other rheumatic affections for w. it was applied
& must take particular care to keep y. patients from getting cold
whilst they are employing these med.; for it will often bring on a rheumatism
other diseases y. are more dangerous than those we attempt to cure
them. They have also been recommended in apoplexy.
Apoplexy particularly distinguish'd into 2 kinds: the sanguineous & y. serous. In y. former
there is either an extravasation, fit or congestion of blood in y. brain:
y. latter there is an extravasation or congestion of serum. Sternutatories
powerful stimuli applied to y. Nostrils are certainly hurtful in
sanguineous apoplexy not only by increasing y. determination of blood to
brain, & by stimulating or depriving a contraction of y. arteries by w. they blood will
forced w. greater violence into y. veins; but if they bring on a sneezing
the vessels in y. brain may perhaps well burst & thus make an end of y. patient.
has been thought that there was little or no danger of y. appearing in y. serous
apoplexy, & therefore they have been almost universally recommended in this species
apoplexy. But I am of opinion y. they may even prove hurtful here
& are seldom attended w. those good effects y. have been ascribed to them.
for there is an extravasation or congestion of serum the brain will be equally compressed
as in y. sanguineous apoplexy, & sneezing will certainly have y.
of increasing this pressure, for we find y. persons in all appearance
dead have got a fit of an apoplexy from violent sneezing. If this can
happen where there is no signs of a previous compression on y. brain, it must
certainly be more frequently y. case when y. compression has already taken
place. We can w. other stimulants effect y. same as sternutatories will do,
not run y. same risk, we should therefore be very cautious how we
them during y. fit of an apoplexy. The cases & sternutatories y.
be employed when med. of y. kind are indicated are Tobacco & Asarum y. leaves of

A Treatise on Celly been
Succeeding of Sir Humphry, &c
any of the Others: it is apparent
Sally & opinions of Dr Murray & others
that this is false & yet if
dom as any other potash or
is yet former in its effects
yet very as in Frequent
a very mild potash of
ated are milder than the
common
the acid & calcinate are
operation as yet is upon
Stomach they produce such
It will whatever purge infla
whenever therefore we intend
Order it in a large dose. We
purpose, it is given at
moral; but in a large dose, or
in a smaller quantity it
therefore always give it in
It is forced to resolve
It also keeps
other
operations
contrary it stimulates
It is carried off in not
transpiration are but seldom
other perspiration must

A Treatise has lately been published by Dr. Blank at Vienna
on the use of Mercury combined with the
mucilage of Gum Arabic, & advantages are ascribed to this preparation above
any of the others: it is asserted that it will hardly ever salivate, & yet have
all the effects of Mercury when it does salivate. ~~The latter~~ I am convinced
of this is false & that if it be accurately prepared it will salivate as
as any other preparation of Hg. of a similar nature. It agrees entirely
with the former in its effects & manner of operation. Mercury united with
nitrous acid, as in Hydrargyri Pill, a famous quack medicine, gives us also
very mild preparations of Hg. medicine. The preparations of Hg. with the nitrous
acid are milder than those with the vitriolic acid; but those with the marine
acid, as corrosive sublimate are the most acrid. All these differ in the
operation as the first is extensive or partial. When they are taken into the
stomach they produce sickness & pain, & sometimes bring on vomiting.
They will however greatly inflame the stomach, ~~but~~ instead of having the effect
whenever therefore we intend to give it in this view we should always
give it in a large dose. We generally employ the Turbith mineral for Hg.
purposes. If it is given at ½ gr. for a dose it will act on the system in Hg.
way, but in a large dose, viz. of grains it will prove emetic. If it is given
in a smaller quantity it ~~does~~ occasions excruciating pains; we must
therefore always give it in such a dose as to make it operate directly.
It is found to resolve swelled testicles better than any of the other preparations
of Hg.; & it also keeps up the salivation longer than most of the
others. Corrosive sublimate stimulates the & proves purgative: in this case the
Hg. intervenes it is carried off without having any further effects on the system. Mercurial
purgatives are but seldom employed alone; but are generally combined with
other purgative med. whose action they are found to increase by their stim.

The [illegible] does of calomel [illegible]
[illegible] ought to be [illegible]
officer: [illegible] contradic[illegible]
opposition, but I believe [illegible]
for their [illegible] the court [illegible]
Therefore calomel is used [illegible]
carried into the Mass of blood [illegible]
mixed [illegible] constitute of [illegible]
by the [illegible] & conducted [illegible]
into the [illegible] of their determ[illegible]
pity is not spasms of the [illegible]
than if we often bring on [illegible]
obnoxious, very dangerous [illegible]
[illegible] very highly [illegible]
& when introduced into [illegible]
most desirable operation of [illegible]
any [illegible] from taking place [illegible]
& difficult Physicians have [illegible]
in abscess & many [illegible]
Brain & intestines & inflam[illegible]
practitioners therefore seem [illegible]
employ salivation because [illegible]
[illegible] endeavour to find out [illegible]
a copious sweat. We have [illegible]
& are most apt to have [illegible]
quicker [illegible] circulation, [illegible]
& milder one. They must [illegible]
therein they will run the [illegible]

the small doses of Calomel are employed w.h advantage in many diseases. It is thought ~~I do~~ y.t a mercurial purgative is superior to any other in y.t
cases; I shall not contradict y.t fact because I ~~have~~ cannot do it from
experience; but I believe it would be very difficult to give y.t reason
for this. The most eligible position of y.t is best for a purgative, &
before Calomel is used. Mercury exerts its greatest effects when
mixed into y.t Mass of blood & is y.t also collected in y.t excretories. It may be det,
mined to diff.t outlets of y.t System & may be made to purge, sweat & salivate.
By the purging I understand in y.t case is to introduce mercury first
into y.t blood & then determine it to y.t Intestines. We can never excite purg
ing without spasms of y.t Intestines, & if we persist in a long course of
them it, we often bring on chronic Spasms & inflamation w.h are
attended w.h very dangerous consequences. It this method therefore is
no very properly neglected. It was first practised by Desault in France
was introduced into England by Douglas. Sweating is y.t easiest &
most desirable operation of mercury, but y.t difficulty here lies in procuring
any other from taking place. As this operation of sweating is so difficult
to procure, Physicians have been led to employ salivation, but this
is attended w.h many inconveniencies y.t most obvious are a very tedi
ous confinement & inflamations y.t sometimes prove dangerous. All
practitioners therefore seem to be unanimous in saying y.t they only
employ salivation because no other means can be used. We should there
fore endeavour to find out a method by w.h we could excite & keep up
a copious sweat. We have now learned y.t y.t most acrid positions of
Hg are most apt to have this effect, because they will more readily
quicken y.t circulation, on w.h y.t increase of y.t excretion depends, than
y.t milder ones. They must however be given in a very small quantity, pro
therwise they will run to y.t salivary glands. If they are given in too

large a dose they will inj
they are more troublesome
kept to produce above th
secondly, they are
for ye purpose is ye cond
they are relaxation are
are prepared
something ye of ye ointment.
of ye practical surgery hereafter
much as I can: I think th
when we give ye medicine
such kind
Entatenus
if not more slow & therefore
has given very good rules for
very to he
I am not
do this
rationale of ye practice
time
ted upon
as a surgeon
the Arabians made use of
ers but very seldom & it
latter end of ye 15th
its appearance in Europe
of ye kingdom & was fo

ge a dose they will inflame ye. Stomach: & if they go to ye. glands
ey are more troublesome & excite a greater inflammation & are more
ot to produce ulcers than ye. other preparations; but when we can
revent this, they are very convenient. The substance generally employd
or ye. purpose is ye. corrosive sublimate. When it is necessary to
ry on a salivation we should chuse ye. mildest preparations of ☿: these
e Mercury prepared by trituration wd. Honey or ye. extract, or by
hing use of ye. ointment. But often a purging comes on especially
ye. patient exposes himself to cold: we must guard against this as
uch as we can: I think there is also more danger of this happening
en we give ye. medicine internally; for as we chuse those of ye. milder
d kind, wd. are ye. least soluble, these lay in ye. stomach &
tatines & bring it on: whereas by ye. unction we apply ye. ☿ equally
d more slow, & therefore less liable to be attended wd. this effect. Astruc
s given very good rules for conducting a salivation, I shall therefore refer
m to him.

am ~~and~~ to speak of ye. use of ☿ in various diseases. I shall
this ~~but~~ in a very concise manner, for if I were to enter into ye.
tionale of ye. practice in every disease I should take up more
me than ~~can~~ is consistent wd. my plan. The Ancients to lay
d upon ☿ as a poison & therefore banished it from their practice.
Arabians made use of it in externally applications for blotches & ulc
s, but very seldom, & it was not much used in medicine until
latter end of ye. 15th Century, after ye. Venereal disease had first made
appearance in Europe, & had baffled all ye. medcs. taken from
ye. kingdom, & was found to yield only to mercury. It was at first

vrable & for a variety of dis
expirited Patients. I hold it
ointments have generally
Treacle in his Pharmacopo
a Quick Apothecary & y
published Pill in y. year
ted to cure y. Hydrophobia
a pure energy. He knows no
Mercury. It was to y. Sa
Passages of Montpellier
Favour we must conclude y.
very good medicine for y. dang
applied immediately after y.
Salivation for better y. Hydro
Generally such a short time
for them, the tree above
cured by even after y. hydro
early y. & only y. but
ed every wch adapted to cure y.
sometimes of a mulberry
Bath & every other medicine
ill to a few doses of
good medicine in Calomel
proper time extract y. Sa
mind entirely harmless by
antimonial med. Th
cure effectuate when perfe

Sc & for a variety of diseases & amongst others for a physitisis pulmonalis it was ever thought to possess some
vital Virtues; but it has no manner of effect on y. body. The
ment has been greatly recomended for y. bite of a mad dog by
vault in his ~~Thesis~~ Dissertation on y. Hydrophobia; & Chbiel
uil & Apothecary to y. Society at Pondicherry, in his treatise w. he
blished in Paris at Paris in y. year 1756 under y. title of a short & easy me
d to cure y. Hydrophobia occasioned by y. bite of a mad dog, ~~relates~~
ues as y. he knew no less than 300 persons cured by y. use of
cury. Its use in y. disease has also been confirmed by y. celebra
Passages of Montpellier. From all these & many more evident testimonies in its
our we must conclude y. & internally & externally applied is a
good medicine for y. dangerous & most dreadful disease. It should be
plied immediately after y. bite has been received & continued even untill
alivates; for after y. Hydrophobia is once come on, y. patient has
ually such a short time to live y. little or nothing can be done
him; tho the above Gentlemen relate instances of persons being
d by even after y. hydrophobia had come on. I have before told
y. & was only y. best anthelmintics that is known, & it is also on y.
very well adapted to cure y. ~~disease~~ fevers occasioned by Worms: these fevers
sometimes of a malignant nature & will verify y. power of y.
h & every other medicine y. we can possibly think of; but generally
d to a few doses of mercury. It would indeed appear y. & is
ood medicine in almost all malignant distempers if given in
per time witness y. Small pox, w. you know is now almost
ded entirely harmless by inoculation & preparing y. patient w. & al
ntimonial wine. Mercury is one of y. best means you can employ
ean offensive ulcers, especially if applied externally: it occasions y. kind of

[illegible] before [illegible]
It is [illegible] useful
in fact where the
[illegible] stimulants,
[illegible] however, it may
[illegible] that it decides on
[illegible] or [illegible]
we could be under no [illegible]
[illegible] worst, but
[illegible] a [illegible] person [illegible]
[illegible]. In any stage of it [illegible]
found to be in most [illegible]
[illegible] in [illegible]
[illegible] and by it [illegible]
[illegible] oily [illegible]
[illegible] system may be [illegible]
[illegible] [illegible] be
[illegible] instances of an affection [illegible]
[illegible] on this case [illegible]
[illegible] it is [illegible]
[illegible] tell power any [illegible]
[illegible] most common method [illegible]
but there is not more [illegible]
[illegible] it is more certain, [illegible]
[illegible] generally supposed
[illegible] valuable [illegible]; but the

mation, as I before observed, wch. is necessary to ye. formation of good pus.
It is also very useful in Lueritis, palsys & obstructions of ye. Menses;
in short where there is a sluggishness to perform ye. functions it
requires stimulants; & as this is ye. most general & universal stimulant I know, it may be employed wherever such remedies are indicated. But ye. disease in wch. it seems to have ye. greatest effects is ye. breakg. out of Lues venerea. If we knew ye. proximate cause of ye. disease we could be under no difficulty to account for ye. manner in wch. Hg is so effectual in curing it; but hitherto we know no more but ye. from contact wch. a diseased person another is liable to be affected wch. ye. same disease. In every stage of ye. disease except it be a gonorrhoea or clap, Hg is found to be ye. most effectual cure. The Clap is entirely a topical affection in ye. urethra inflammation in ye. urethra, & it therefore cured by ye. antiphlogistic method, by warm fomentations & locally applied & oily injections. But in a confirmed Lues ye. whole system may be affected, or ye. poison may be carried to a certain part, deposited there & be only perceptible in ye. part. There have been instances of an affection lurking for two years in ye. body before it broke out: in this case it must have been carried about wch. ye. circulation until it is deposited in some place or other; but this still proves that little power any matter introduced into ye. body has on ye. fluids. The most common method ye. is employed to cure a pox is Salivation; but this is not more effectual than any other method of giving Hg, tho it is more certain, because we are sure of ye. Hg taking effect. It was generally supposed ye. ye. venereal poison was carried off by the salivary glands; but this is not ye. case. Salivation is a very

method of curing y. disease
of fend by all some other
of patients would ~~[illegible]~~ it
y. mouth one pillow we
or we employ y. corrosive
it to y. skin, is from
of y. ~~[illegible]~~ the spheres of y.
bones viz. and Allard better
after a salivation has pa
does from coming to is wo
has been condemned by
body. But is no good
Barbo separates y. is no
called to y. rest of y. system
greater than if is dis
even aft. it is formed
then wipe y. rest of y.
place it entirely ~~[illegible]~~
stem. Give order y. mouth
if it will then by y. ab
appears on being rubbed
is. y. ~~[illegible]~~ ~~before I com~~
y. plaid. We have a plaid
y. mercurial disease effectually
Stanton be
it, who informed ~~[illegible]~~
Edes Olsen ap

method of curing y. disease, we have therefore ~~thought~~ always been solicitous of finding out some other method. In many cases we may cure y. patient w.out ~~salivating~~ it. We then either give y. medicine untill it makes y. mouth sore, when we desist for a time & again have recourse to it, or we employ y. corrosive sublimate in very small doses, so as to determine it to y. skin, w.h from its stimulus it is more apt to do than any of y. other systems of y. medicine. It is also on y. acct. y. it generally cures venereal Ulcers better than any of y. other means, even sometimes after a salivation has failed. Ulceration is freqtly employed to prevent bubos from coming to a suppuration, & thus dispelling them. This practice has been condemned by some as dangerous & tending to infect y. whole body. But w.h no good reason. It has generally been supposed y. if a bubo suppurates y.re is no danger of y. venal poyson being communicated to y. rest of y. system: but this is an error, y. danger is rather greater than if it is dissipated by ~~y.~~ For during y. suppuration & even after it is formed ~~on~~ some of y. matter may be absorbed & thus infect y. rest of y. system; whereas if we use mercury to y. place it entirely ~~prevents~~ destroys y. poyson & prevents it from affecting y. system. If we order y. ointment it should be applied below y. bubo, for if it will then by y. absorbents be carried directly into y. gland; whereas by being rubbed upon or above y. bubo it must first be carried ~~y.~~ y. blood, ~~before it can arrive~~ & is, by y. circulation brought to y. gland. — We have a plant growing in this Country w.h is said to cure venereal disease effectually. It was by an Indian communicated to Sir Wm. Johnston, ~~who informed~~ he ~~Prof.~~ Mr. Kalm, Prof. of Natural history in Sweden, of it, who about 20 years ago was sent into y. Country by y. academy of Science,

in Cancer, to promote any
tions of the Society of gene
a Specimen of ye Lobelia & o
mary ye Sec^y & I demand
but requested to keep com
more or less according to y^e
well. Some advice ye root to
it has been kept for 3 year
of Water &c. in 3 quarts
particular is to take as mu
it also for his common
gative, as often happens
quantity as just to avoid
himself of any spirituous
chiefly of Vegetables, the
to continue in this m
time and ye where co.
ye he is [illegible] ye time
add a little of ye Roots
to ye decoction of ye Lobel
inconvenience [illegible] —
who had some years b
from ye discovery, but w
of ye root & plant seem
then to [illegible] shalom be
you. It seems then ye we

in Sweden, to promote useful knowledge. He describes this plant in ye. transactions of ye. Society & gives us ye. following history. The plant appears to be a species of ye. Lobelia & is by Linnaeus called Lobelia Syphilitica: it grows near ye. place & I demonstrated it in my Botanical Lectures last Summer, but neglected to keep some of it: The Indians take ye. roots of 4 or 6 plants more or less according to ye. violence of ye. disease: there the wash & clean very well. Some advise ye. root to be taken fresh, others prefer ye. dried root, & after it has been kept for 3 years. They boil ye. Root in a sufficient quantity of Water eg. ~~in~~ 3 quarts of Water to ye. above quantity of root. The Patient is to take as much of it every morning as he pleases, & uses it also for his common drink during ye. day. But if it proves purgative, as often happens, he is to take less of it, & use in such a quantity as just to avoid ye. inconvenience: ~~It~~ it is not to indulge himself w.th any spirituous liquors: to live on a very thin & spare diet, chiefly on Vegetables, tho he may sometimes eat ~~some~~ a little meat. He is to continue in this manner for a fortnight or 3 Weeks, & at ye. same time wash ye. ulcers w.th it if he has any, & it seldom happens but w.th he is cured in ye. time. But if ye. disease is very violent they add a little of ye. Roots of a Rhamnus ye. grows in ye. Woods to ye. decoction of ye. Lobelia. This vomits & purges & is successful beyond expectation — Mr. Shalon then says ye. he knew a person who had some years before been in imminent danger of his life from ye. disease, but was cured by an old Squaw. He had still some of ye. roots & plant remaining w.ch had cured him, & on shewing them to Mr. Shalon he discovered they were ye. Lobelia Syphilitica. You. It seems then ye. we have a Vegt. of equal if not superior Virtues

to Mercury for y. cure of y.
even tho' y. Alkali
not an uncommon disho
here y. they have no
people y. put themselves
have the in y. least ag
y. the Cobelia is y. fo
fore recommend it to you
you have an opportuni
ced it, if you will not
render yourselves in a pe
I told you in one of my
ction, y. there were
this Lecture, y. Chemi
great medicine ~~[illegible]~~
any [illegible] of y.

This is a Class of Med.
in to they are indicated but
I told you before y. y. dis
performed on y. same prin
By Expectorantia then
of mucus by y. lungs.
to have this effect, but
whether expectoration
into y. body, & whether

to Mercury for ye. cure of ye. disease, without those disagreeable circumstances & even danger ye. attends ye. use of ☿. We know certainly ye. ye. pox is not an uncommon distemper amongst ye. Indians, & it is equally certain ye. they have no ☿ to cure it with. but ye. they greatly wch cure white people ye. put themselves under ye. care is affirmed by most who have or in ye. least acquainted w. them: it is therefore highly probable ye. the Lobelia is ye. plant they use on these occasions. I would therefore recomend it to you to ~~to~~ make a tryal of this plant whenever you have an opportunity, & if you should be so happy as to succeed w. it you will not only acquire great advantages from it, but render yourselves in a peculiar manner ye. benefactor of Mankind. I told you in one of my former Lettres, when speaking of ye. Mercurium, ye. there were certainly some Vg. ye. had ye. power to cure this disease, & ye. Shearedyke's decoction or ye. Lisbon diet drink, a famous wch medicine ~~certainly~~ had ye. effect in a more eminent degree than any preparation of ☿. Our next head of remedies are ye.

Expectorantia.

This is a class of Med. ye. every person ~~has~~ hopes to speak of, & ye. ~~many~~ diseases in wch they are indicated but I believe very few understand ye. operation. I told you before ye. ye. discharge by ye. lungs or expectoration was probably performed on ye. same principles as ye. secretion of urine & perspiration. By Expectorantia then I mean such med. as encrease ye. discharge of mucus by ye. Lungs. There is a prodigious variety of med. ye. are said to have this effect, but I think it is upon ye. whole very uncertain whether expectoration can be much encreased by substances introduced into ye. body, & whether it should not be always rather considered as

natural
as consequence & when
as I have observed, expect
expectorants on y. expectorant
in y. opinion, viz. that
medicines employed as expectorants
but I have strongly proved to
have y. contrary. This opinion
on y. principle many are
employed in Chronic cases
in fact Chemistry has very
this kind freely in these d
consequence of y. chemical
arises from expectorant by
y. those decomposition by
expectorant
that effect valid as an exp
tues, by which removes y. effect
of mucus

Cedrus

Cedrus Libani, Stylopes, Pl.

upon an expectorant, the
an acrid inflammatory
flammation nature they are
y. relaxed, paralyse there be a

Cna

This is constantly upon the
oil, of an inflammatory na
Camphor is a volatile

natural
as evacuation & when encreased, owing to Nature. It is very uncertain,
as I before observed, whether meds. act on our fluids: & tho' y. are again
exported on y. expectorates are liable to so many changes & accidents
in y. prima via, that their effects on them are very uncertain. The
meds. employed as expectorants have generally been considered as Demulcents
but I formerly proved to you y. it is very doubtful whether any meds.
have y. power. This opinion however is very prevalent & dangerous; for
on y. principle many acrid meds. have been introduced as expectorants
& employed in diseases of y. breast; wh. is a bad Practice & Boerhave
in his Chemistry has very justly ~~you~~ cautioned us not to use meds. of
this kind freely in these diseases. If they promote expectoration it is in
consequence of y. stimulus they give to y. expectories. Some may
also prove expectorant by y. antispasmodic virtues; as well as those
that prove diaphoretic by taking off spasms on y. surface, & I imagine
y. effects of Asa fœtida as an expectorant are owing to its antispasmodic vir,
tues, by wh. it removes y. obstructions ~~kind~~ & spasms y. prevent y. excretion
of mucus

Particular Expectorants.

Hedera terrestris, Hyssopus, Polygalum & Marrubium. These be are always looked
upon as expectorants, tho' w. very little or no reason. They all contain
an acrid & inflamatory essential oil; & I imagine y. on act. of y. in,
flamatory nature they are rather hurtful than otherwise in diseases of
y. breast, unless there be of a peculiar nature as y. Asthma pituitosum.

Enula campana. Elecampane.

This is constantly spoke of as a pectoral. It contains an acrid essential
oil, of an inflamatory nature; & on distillation also yields an oil resembling
Camphire wh. a volatile salt. If it acts as an expectorant it is in

consequence of its primeval
in disease of ye breast
surgeon. If he be either
is liable to ye same reproa
be taken upon into ye Hou
indeed for forming any
those ye recommend there
ye manner of operation
whether what they say
The Ipecacuanha, Nitr
person only pectoral in consu
on ye system & can help
of ye Principles on ye form
The Ipecacuanha is in
ordinary dose may then be
Squilla. This is a mu
& is highly recommended
& then prevents as from
given in small quantity
Scilla This is also an
stance. It is a powerful emet
I am to ask to know whether
surgeon is a hydrogog
problem. There are two
very considerable effects in hy
effects a
I have had
cases of
cancer; but the

nsequence of its stimulus, & therefore in many cases an improper medicine
diseases of y. breast. It is also diuretic & in large quantities proves
ngative. It has likewise been recommended as an emmenagogue; but
liable to y. same objections y. all other med. are ad. are first to
taken up into y. blood & again deposited in y. excretories. There is
deed no forming any judgment of y. virtues of a medicine whilst
ors y. recomend them speak only in general terms: if they were to add
manner of operation we might then be able to judge ~~of y. probabe~~
hether what they say is probable

e Iris florentina, Nicotiana & Scilla are all emetic & purgative: they
e only pectoral in consequence of y. universal stimulus they have
y. system & can therefore only prove expectorants after they are deposited
y. stimulus on y. stomach & intestines.

e Iris florentina Fis in its recent state very acrid, but it loses its acrimony
drying & may then be employed as an expectorant

icotiana. This is a much more powerful medicine than the former,
is highly recomended in diseases of y. breast. It is very acrid & nauseous,
this prevents us from making freq. use of it; the y. syrup & extract
ein in small quantity might also be successfully employed

cilla This is also an universal stimulant & a remarkable acrid sub-
tance. It is a powerful emetic & is freqly employed in y. intention; but
am to loose to know whether it is to any special advantage. It is also
urgative & ad. a hydragogue virtue. Among y. dissertations y. Haller
ublished there are two upon Squill, by wh. it appears y. they have
ry considerable effects in hydropic cases, & y. large doses of them had
fected a cure. I have had an opportunity to see them tried in similar
ses, & ad. success; but then y. was no greater than ~~one~~ could expect

from the common practice
are carried into the blood
disappointment as of their effect
extremely as of pectoral, but
any other opiat to be desired
vine with the mass of blood
We can only appeal to experience
means be preferred the immediate
chance of introducing opiates
blood by the art. we should
they should be cut transversely
naturally separate, the medicine
the bowels in a great measure
of the blood by Vinegar in
infuse it in wine or
a general rule 3d. we should
their own natural juices
considerable
any effects on them. But
preferable to the one of the
of Theriac this & all other
be operation over those.
more agreable & more certain
of pills are ordered, there
draw very uncertain & they
avoid all their inconveniences
of pills are frequently employed

from ye common purgatives wch we employ in hydropic cases. When they are carried into ye blood they prove diuretic; but they oftenest fewer disappoint us of this effect, than they are found to abunder. It is highly esteemed as a pectoral; but ~~com~~ we are here as well as in ye former case very often apt to be deceived, & it is very difficult to introduce a medicine into ye mass of blood in such a manner as to be sure of ye effect. It can only appear to owed by dissipating ye more volatile parts, by wch means we prevent ye immediate action on ye stomach & have a better chance of introducing ye medicine in greater quantity into ye mass of blood. On ye acct. we should in general use them dry. For ye purpose they should be cut transverely for if they be dried in tresses or as they naturally separate, ye membrane ye surrounds each squame prevents the drying in a great measure. When we want to extract ye virtues of squill by Vinegar in order to mitigate its taste, or whenever we use it in wine or ∇ it should always be in a dry state: this is a general rule wch we should observe in all plants; for unless they be dry their own natural juice wch prevents ye menstruum from having considerable effects on them. On ye acct. ye Recd: Scill: of ye Lond: Disp: is preferable to ye one of ye Ed: Disp: The Oxymel Squill: is a disagreable preparation. I think this & all other preparations made wch honey might very well spared in our Shops. The Vinegar of Squills wch Sugar will afford a more agreable & more certain remedy. In ye pillula scillitica fresh Squills are ordered; these pills suffer a change by drying, wch makes ye very uncertain & they become very hard & almost insoluble in ye stomach: we avoid all these inconveniencies by making use of ye dried Squills.

Squills are freqly employed in asthmatic complaints, in wch they are thought

to act as expectorants. Th
in ye. the ye. lungs an
ye. difficulty of breathing &c
ye. ye. common opinion
gets into ye. bronchia & p
that favours this opinion
every person. But this
the phlegm in ye. cell
same manner as ye. fo
shows ye. effect on the
ye. lungs are owing to the
it, by the secretory it; effe
will remove a fit of an
particular by opium; as
the case but phlegm. Th
this: the relation of ye. stom
ye. accompanies all nervous
ye. disease combine ye. spas
gate
is over by stimulate ye. bronch
describe ye. spasm. I have
dissolve not only in this
ye. opium tartary off ye. irritation
from being stopped in the
owing to the collection of mu
of pills. But ye. lies read
a constant complaint, whic

to act as expectorants. But y. Asthma is generally a spasmodic disease
in wh. the ye. Lungs are affected wh. a spasmodic contraction, y. occasions
y. difficulty of breathing & other symptoms y. attend this disease. Hence
y. y. common opinion in y. case is against me, wh. is y. y. phlegm
gets into y. bronchia & prevents their being distended by y. air; this those
that favour this opinion conclude from y. evacuation of phlegm after
very paroxysm. But this by no means forces this opinion to be just;
the phlegm in y. case is a sign of y. spasm being solved, in y.
same manner as y. sweat wh. succeeds y. hot & cold fits of fever
shows y. y. spasm in those diseases is overcome & y. obstruction in
Lungs were owing to this mucus, it would not be possible to remove
it by evacuating it; whereas y. contrary is found to be y. case, & nothing
will remove a fit of an asthma so quickly as antispasmodics &
particularly opium; wh. would be hurtful were y. disease owing to any
other cause but spasm. The other symptoms y. attend y. disease confirm
this: The inflation of y. stomach & particularly y. copious pale urine
y. accompanies all nervous diseases, are y. most convincing. I generally in
y. disease combine y. Opium wh. squills, wh. after y. operation of y. opium
over, gently stimulate y. bronchia to evacuate y. phlegm y. has been collected
during y. spasm; & I have frequently seen most surprizing effects from y. comb.
Tination not only in this disease but in many old coughs & catarrhs.
Opium takes off y. irritation whilst y. squills prevent y. expectoration
from being stopped in these diseases. The Asthma humorale wh. is evidently
owing to a collection of mucus forbids y. use of Opiates, & indicates Vomits
& squills. But y. is readily distinguished from y. former, by its being
a constant complaint, whereas y. spasmodic asthma is a periodic disease

co. come on at regular d
y. Arrival of y. fit y. f

Extract of Letter

y. vast riches, the y. Th
Both have been greatly
there only, were it not for
more certainly there y. f
has work in every good
in this recommended y. p
formed since Co. ill. This
wishes have perfectly tired of
hall water & nothing had
me y. he at first employ
he could not have this
success than if he had
for us in this country
does not grow in
y. pe exists our
of consequence to find
we have instructed employ
if it has been already
is and y. has been re
for experience confirm
to a royal

They are remarkable for a
dissolution. I cannot det

wd. comes on at regular stated periods, or is excited by occasional causes, & during
y. Interval of y. fit y. patient has not any complaints at all.

Tussilago & Petasites. Belong to y. same genus and probably possess
y. same virtues; tho y. Petasites is a more acrid medicine than y. former.
Both have been greatly recomended as pectorals; but I should have preferred
them over, were it not for another Virtue wd. y. Tussilago possess & wd.
more certainly than y. pectoral virtues attributed to it. Dr. Fuller who
has wrote a very good book wd. he calls his Medicina gymnastica has
in this recomended y. Tussilago in y. Scrophula & declares he has per-
formed cures wd. it. This has been confirmed to me by several ingenious physicians
who have freqly tried it in these cases, & have found it succeed after
Salt Water & bathing had been tried to no purpose. A ~~Gentleman~~ Physician told informed
me y. he at first employed y. recent juice at ½ ℈ss ounces a day, & when
he could not have this he used y. dryed herb in decoction & wd. better
success than if he had given y. Juice. This is a favourable circumstance
for us in this country as we can only have y. dried herb, because y. plant
does not grow in America. The Scrophula you know is a disease
y. freqly exists our most efficacious remedies: it is therefore a matter
of consequence to find out some one y. is more successful than those
we have hitherto employed. The Tussilago ~~should be tried~~ deserves our attention
as it has been already found serviceable in y. disease. The Lycopsis
is another y. has been recomended in this complaint, & tho I cannot
from experience confirm its use in it, yet I think it is also entitled
to a Trial.

y. Benzoin & Styrax Calamite.

They are remarkable for a volatile acid salt wd. each of them gives out in
distillation. I cannot determine how far this may be y. foundation of y.

pectoral virtues; but
yet effects as any other
a close
Benzoin is of no other
agreeable flavour to
Prio by
& then to you it was
bestowed on it
The application of this
yes, & many instances
complaints. It has
y are employed for y
quantity w. is rarely
glasses, but y effect can
very considerable dose
These are some particular
applications: e.g. The
They are in
applications. The objection
unavoidably pectoral. It
in hoarseness. Tho they
they are very volatile
matter to give them
way is to give them
introduce into y Mass of

pectoral virtues; but I know y. y. flowers of Benzoin are as dubious in y. effects as any other expectorants. I have seen it given at ℥j & ℥ss for a dose without perceiving any effects from it; from wh. I would conclude y. Benzoin is of no other use in Officinal Potions than as it gives an agreeable flavour to y. compositions.

Pix liquida or Tar water. Of this I have spoken before & then told you it was nauseous medicine & did not deserve y. praises bestowed on it.

Soap

The reputation of this was very considerable as a pectoral about 25 years ago, & many instances have been alledged of its good effects in pectoral complaints. It has better chance to succeed than many other substances y. are employed for y. intention, for it may be given in considerable quantity & wh. is readily evacuated by y. kidneys & also partly by y. mucous glands; but y. effect can only be obtained by those who can take it in very considerable doses.

General tribes.

Stimulantia

There are some particular kinds of Stimulants y. ~~may~~ have been employed as expectorants: e.g. The Umbellatae ~~and~~ wh. y. chiefly are Anise seed, Carraway & ~~Most of they~~ are in general diuretic & therefore they may also prove expectorants. The Siliquosa particularly Mustard & Horseradish are also undoubtedly pectoral. I have formerly told you y. they were very useful in hoarseness. Tho they are acrid, they are not of an inflammatory nature: they are very volatile & y. effects only transitory, this makes it difficult matter to give them in such a manner as to prove pectoral. The best way is to give them entire as e.g. unbruised Mustard seed; for they may then be introduced into y. Mass of blood. The Alliaceae such as Onion & Garlick

must be given in y. same manner if they are intended to prove expectorants, for ~~they~~ we will need neither Garlic prove diuretic unless it be swallowed whole. Some have said y. Garlick is of so penetrating a nature y. it will ~~prove be~~ promote expectoration if applied to y. Soles of y. Feet; but this is rather ascribing too much to its penetrating odour.

2. Antispasmodica.

Assa fœtida is one of the in my opinion y. most ~~to~~ powerful antispasmodic pectoral Gum. Ammonia has generally been supposed to be peculiarly adapted ~~for~~ this purpose; but it appears to be not so antispasmodic as Assafœtida, & more heating & inflamatory.

3. Demulcentia

Under this head come also y. Lactes. It is doubtful whether they prove pectoral by y. Stimulus or by Demulcent Virtue. The former seems y. most probable opinion for Sugar will stimulate ~~up~~ the Secretory Ducts. They are freely used in hoarseness & catarrhs & here they may at y. same time act as demulcents & heals y. acrimony.

Emetica

I shall not here enter into a definition of vomiting, or in what manner it is performed, as I take it for granted y. you are acquainted w. it. Nor could I mention y. various effects of vomiting, but y. you cannot possibly understand y. effects of particular emetics w.out a knowledge of y. general Virtues of those substances y. are employed to excite vomiting: all of w. agree so much in y. general ~~qualities~~ properties y. speaking of them here in general will in a great measure superseede my ~~y.~~ observations under particular emetics. In the

yet
y. fluids then we obtain
but we cannot at all
excited: various matters
stomach y. can only
water or some other
to give but small doses
In order to excite only
by, by it has been
obtained from this
sometimes be indicated
we will not obtain the
producing a full warm
ded repeate vomiting;
y. stomach will be
Vomitoes causes a flow
aqueous but y. liquor
gally for vomiting y. mu
paste excited: it has
glands, particularly
h. y. lessen y. vomiting
tion of y. stomach itself,
induces it is carried
this answer to explain y.
ned by y. squeezing of
at y. end of y. duration,
y. y. vomito has done
trule y. y. vomiting

1st place then we observe: That vomiting evacuates y. contents of y. Stomach; but we cannot at all times know whether ~~they are wholly~~ they are entirely evacuated: various matters may be lodged & detained in y. folds of y. Stomach y. can only be washed out by large & repeated draughts of water or some other fluid. It has of late been much y. practice to give but small doses of any emetic & order ~~but~~ drink but sparingly in order to excite only a few evacuations; but give these doses repeatedly, by wch. it has been thought y. same if not greater effects would be obtained from this operation. I do not know but y. y. method may sometimes be indicated in particular diseases: it is however certain y. we will not obtain the same effects as we would by a proper full dose producing a full evacuation. Small quantities of an emetic will indeed excite vomiting; but then I think it is very doubtful whether y. stomach will be properly & entirely evacuated. In y. 2d. place Vomiting causes a flux of humours to y. stomach & emulges & squeezes out y. liquor contained in y. mucous glands of y. organ. 3dly By vomiting y. mucous follicles of y. Stomach are not only y. hasty evacuated: it has y. same effect on y. neighbouring & adjoining glands, particularly on y. Liver & pancreas.

4thly While y. vomiting continues, it not only injects y. peristaltic motion of y. Stomach itself, but also of y. Intestines, ~~wch~~ thus pour out y. mucus wch. is carried to y. stomach & evacuated wd. y. contents of this. This serves to explain y. throwing up of y. bile, wch. is manifestly occasioned by y. squeezing of y. Liver & gallbladder: this is proved by its occurring at y. end of y. operation, & is not without reason looked upon as a test y. vomiting has ~~done~~ operated perfectly & may be looked upon as a rule y. y. vomiting should not then be any farther urged. By

the vomiting squeezes y.
y. bladder, when there
precaution of carrying pale
y. disease, because on
of y. gall into y. duct
occasion a Jaundice.
it is not attended w. so
or perhaps also regul
to a overabundance of y.
not only
then Bowels are difficult in
motion, but they also occa
w. if vomiting continu
y. faces or sometimes
may be inverted. I know
y. neither y. faces or
vacuum, I have into y.
to shew this from the
certain parts y. contrad
a Dencial. I shall prep
y. vacuum, & then
y. thus shown up by
fact & method y. has
cattisency. This is performe
w. we can expect such
great if it will overcom
by y. Mouth. It was fir
into the
Mouth you will
Depth w.
on Bodyg

the vomiting squeezes y. Liver & Gallbladder it may push biliary stones & concretions into y. Intestines when they stop up y. ductus communis, & thus be a means of curing jaundice. I have however seen it produce y. disease, because on y. same foundation, it may force y. stone out of y. Gall into y. duct, & if it is too large it may effect there & occasion a Jaundice. Whilst a stone remains in y. Gallbladder it is not attended w. any inconvenience & y. Jaundice is only owing to a reabsorption or perhaps also regurgitation of y. bile into y. blood. ~~By exciting y. peristaltic motion~~ Vomits are not only useful in Dysenteries & diarrhoeas by exciting y. peristaltic motion, but they also occasion a greater flow of liquors into y. Intestines & if y. vomiting continues are thrown up by y. stomach, & even fæces are sometimes evacuated by y. organ, w. shows y. y. whole tract of y. Intestines may be inverted. I know y. this is denied by some who affirm neither y. fæces or Glysters can force y. Valvula ~~coli~~ of y. Intestinum Crassum & pass into y. Stomach. But however they may endeavour to shew this from theory, & talk of y. impossibility of it, there are certain facts y. contradict them & are too plain & evident to bear denial. I shall pass over what Authors say often happens in y. Ileum, & others who assert that they saw Glysters injected by them thrown up by vomiting, & confine myself to a particular fact & method y. has been lately invented to cure y. most obstinate costiveness. This is performed by a Machine adapted for y. purpose by wch can inject such a quantity of Water & make y. pressure so great y. it will overcome all resistance & force its way out again y. Mouth. It was first to be made use of in Italy & if you will look to de Haehn you will there find it confirmed. He even made many experts w. it on Dogs & found y. he could make y. Water pass every

readily through y. ch
could then ~~clean~~ y
so clean as they hav
y. operation for will
never to shew us y.
points & on y. alim.
If y. bowels cause
at any rate work
& this independent
offensive stuff then
but if seems to be
y. is such a stimulus
~~y. retain~~ on prem
may by y. weight prom
and it seems highly useful
prescribed repeatedly
highly ~~and~~ a flapp
to determine y. humours
by perspiration ~~&c~~
5. By vomiting all y. abdom
mesenteric glands by ye
out as it were ~~by the~~
caused by y. emetics
do indeed generally compl
found to answer effect
find several cases related
obstinate vomitings. Do
not cured by y. evacuation

readily through y. whole tract of y. Intestines & issue by y. mouth. He
uld then ~~clean~~ pass y. Intestines from all impurities & render them
clean as if they had been washed in ∇. The dogs were ½ an hour after
operation as well as ever they were in y. Lees. This then I say
proves to shew us y. y. Contents of y. Intestines may be evacuated by Vomit
ith & y. on y. side. They may prove very useful in Diarrhoea & Dysentery
y. vomiting causes y. humours are evacuated by stool & thus they will
any rate wash away y. foulness & acrimony sticking in y. Intestines
this independant of y. emetic substance being carried into y. Intestines
stimulating them. It is not indeed probable y. it does arrive there
it seems to be thrown up again by y. first operation; but then
is such a stimulus given to y. whole system y. y. humours ~~in~~
~~Intestines~~ are poured out in larger quantity into y. Intestines &
by y. Weight prove purgative. There is still another reason why they
so remarkably useful ~~in this disease~~ cases of this kind. Their Discharges are
caused or keep up by ~~being~~ ~~to~~ a stoppage of y. perspiration. I know no method for efficiently
determine y. humours to y. Skin & restore or encrease y. evacuation
perspiration ~~perhaps~~

By Vomiting all y. abdominal Viscera are compressed, but particularly y.
enteric glands, by wd. means y. whole Lymphatic System is pumped
as it were. ~~By this~~ It is for y. reason as well as by y. evacuation
ed by it y. emetics have y. power of encreasing absorption. We
indeed generally employ purgatives for y. purpose, but emetics are
nd to answer equally well. In y. London medical essays you will
d several cases related of dropsies being cured by spontaneous
lificial vomitings. Vomits are often in y. disease y. best remedy,
ly by y. evacuation they cause, but in a great measure by

necessary y. observation
of the place as Dominion
y. circumstances in y. observation
We commonly find in
of Urine there is present
liquid Tartar into y. form
ch depends on y. fermentation
we know y. a violent
ting, it is therefore neces
sand also have some effect
might be caught in freezing
But it is difficult to be
cases, in ed. vomit phys
other agents. I have also
We may say this for y. fermen
matters, by w. this is effected
good fermentation: if therefore
to be true, we may
these fermentations. If for
the fermentation to be just
of fermented Vinous ex cal
The plan we are to engage
Fermentation. Then if ~~opinion~~ of
y. it was very doubtful of
any of y. uses. y. are jus
of Tartar produced by Domin
pretty more use of in diseases

hindering y. absorption of y. secreted fluid. In y.
4th place as Vomiting occasions a constriction, squeezes & bruises all
viscera in y. abdomen, it may also have some effect on y. kidneys.
We commonly find indeed y. emunctories, excrete y. secretion & evacuation
of Urine: This is generally said to be owing to y. great quantity of
liquid taken into y. stomach at y. time; but I think y. much of
it depends on y. sympathy & consent between y. stomach & kidneys:
we know y. a violent irritation on y. kidneys will produce vomiting,
why, it is therefore reasonable to think y. vomiting may on y. other
hand also have some effect on y. kidneys. Hence y. it would appear y. Vomits
might be useful in forcing away stones & calculous concretions in y. kidneys.
But it is difficult to know whether they should be given in these
cases, as some Physicians have always imagined them dangerous,
other again I know who use them & apparently w. success & safety.
I may say this for y. practice y. it seems to be an imitation of
nature, by w. there is often violent vomiting exerted in these cases & probably for
good purposes: if therefore to imitate nature be a rule y. is found
to be true, we may on y. same principles give Vomits in
Pulmonic Complaints. But for my part I do not admit this old hippocratic
saying to be just & I must confess I should hesitate long before
I prescribed Vomits in calculous & nephritic cases. In y.
5th place we are to enquire whether y. effects of Vomits extend to y.
lungs. When I treated of Expectorants in my last Lecture I told you
it was very doubtful whether we could promote expectoration by
any of y. meds. y. are generally classed as pectoral. This effect is much
more produced by Vomits than by any other medicines. They are also
very usefully made use of in diseases of y. breast, particularly in y. Asthma pituitosa,

ny, in w.h. they operate by evacuating y.e mucus. In an incipient Phthisis
Anomalous repeated vomiting & bleeding is almost y.e only certain
Method of cure. We may here observe y.t y.e action of vomiting during
inspiration is obstructed, it can only take place when y.e diaphragm is relaxed in expiration. This will be come applicable
in practice as I shall afterwards shew. In y.e
place vomiting increases y.e contraction of y.e fauces & emulges
urges out y.e liquor in y.e mucous & salivary glands. They will therefore
be serviceable wherever y.e mucous phlegmatic in y.e fauces, w.h it
sometimes does, threatning suffocation. They will also have y.e effect
of Revulsatories or Pediluvies in relieving rheumatic affections of
the head, toothach &c.
During y.e time of vomiting y.e pulse is small, weak & intermitting,
when y.e vomiting is over y.e stimulus continues, by w.h y.e circula-
tion is quickened w.h a fullness & hardness of y.e pulse, a determination
of y.e blood to y.e surface & scrotum. The sweat in y.e case may be
supposed to proceed from y.e increased circulation, but it
may also be owing to y.e consent or sympathy y.t there is between
y.e stomach & surface, & I think y.t it is very probable y.t they act
on y.e antispasmodics on y.e nerves of y.e extremities; for if we joine
emetics w.h opium the antispasmodic virtues of either are increased
& y.e combination is a more powerful diaphoretic than if either of
them were given single.
Tho we have y.e primary effects of emetics, w.h regard to y.e secondary virtues, there
are so various & numerous y.t it is impossible to enumerate them all
here. They may all be explained from y.e evacuating y.e stomach, increasing
the circulation & from y.e antispasmodic virtues especially in y.e
extremities of y.e vessels on y.e surface; this leads us to consider y.e use in
fevers; but I shall defer this untill I come to treat of Fr. emetics & y.e

other [illegible] physic
[illegible] I shall at present
[illegible] means of preserving
[illegible] beginning of [illegible]
[illegible] not always
[illegible] considerable
[illegible] I shall
either [illegible] or in the
[illegible] place [illegible] constitutions for
[illegible] obstruction other
[illegible] circulation. [illegible] are
[illegible] fixed in [illegible]
should not begin, but
[illegible] whether they should
may consider [illegible] are
[illegible], [illegible] in a School
[illegible] plant, but
[illegible] should lead
[illegible], especially as there are
[illegible] is however one
[illegible] are of
[illegible] a Nursery, where [illegible] is
[illegible] same kind of
[illegible] accordingly
[illegible] there are stagna

other antimonial preparations, as it is there chiefly y^e. are employed for y^e.
purpose. I shall at present only say y^t. as y^e. animal oeconomy has many
helpfs means of preventing disease, so does y^e. vomiting wch. naturally comes
in y^e. beginning of fevers seem to be intended for good purposes,
tho it does not always cure y^e. disease, yet it may justly be considered
as giving us an indication to prescribe Vomits in y^e. beginning
of fevers. I shall next mention y^e. cases in wch. Emetics are
either hurtful or in wch. their use is at least doubtful. In y^e.
1st place practitioners forbid y^e. use in all cases where a firm & obs-
tinate obstruction takes place, y^t. can not be overcome by y^e. force of
y^e. circulation. Hence in inveterate jaundices & in cases where firmly
impacted & fixed in y^e. ureters & biliary ducts, it would seem as if emetics
should not be given, but as I observed before y^t. it was very uncer-
tain whether they should be taken or not in y^e. latter case, we
may conclude y^t. y^e. use in other obstructions is at least equally dan-
gerous. Perhaps y^t. in a Schirrous emetics will not only extend y^e.
effects to y^e. gland, but also to y^e. vessels in wch. y^e. obstruction is for-
med. This should lead us to enquire into y^e. use in jaundices since
y^t. especially as there are instances of y^e. being safely used in these
cases. There is however one case in particular in wch. we should be
very cautious wch. y^e. use of vomitors. When y^e. parts are very lax & tender,
as a scurvy, where y^e. is a laxity of y^e. vessels & in cachexy in wch.
there is y^e. same kind of tenderness, vomiting must on y^e. end be
hurtful, & accordingly all Physicians have observed y^t. they are dangerous
whenever there are stagnating & putrefactive humours.

Q. From theory we should be led to imagine y. Vomiting is hurtful where
there is an increased impetus, but as Vomiting does not increase y.
inflammatory diathesis, it may in these cases be employed w.
safety. Dr. Bryan Robinson of Dublin has given us some instances
of Emetics provid useful in inflammatory cases; but he appears
to have been prejudiced in favour of y. remedy, & therefore we cannot
give him y. end it in y. particular instance w. he proposes. I have
seen them given in pleuritic & peripneumonic affections. The pain
did not seem to be increased by them, as y. pain is only very troublesome
in inspiration, & I told you y. Vomiting was performed during y.
expiration. But tho they did not add to y. pain, yet I cannot
say y. they were in these cases attended w. any good effects, &
I think we may justly attain for giving them in these complaints.
I do not think y. Vomiting can be employed w. safety in topical
hæmorrhagies unless bleeding be premised. They are never used in topical
affections of y. Stomach or adjacent parts.

The effects of emetics have always been considered as very dubious in
Hæmorrhages. Robinson, in his Essay on emetics, maintains y. they
are not a marvellous remedy in Hæmorrhages in general than Emetics, &
more illustrates this by cases & examples. They are also advised by some
in Hæmptoe or Spitting of blood. I have known them given w.
good effects in y. Hospitals, & I believe it is y. timidity of Physicians
prevents them from giving them freely. It is certain y. Vomiting
will not aggravate a Hæmptoe. Nothing is more common than to advise
people labouring under y. disease to go to Sea, where they often continue
vomiting for a whole month, & yet y. disease is greatly relieved. The

Straining or conatus vomendi is in this case as
great, if not greater than what
is occasioned by y. taking of Emetics, & we might hence conclude y.
there might at least be given w.t equal safety. We know y. in uterine hæ-
morhages y. Vin: antim: Coat. has been employed w.t advantage if given
in doses suff.t to excite vomiting, & Ipecacuanha has been used w.t similar
success in y. cases by Dr Robinson & others. Dr Huffman has observed y. Hæmorhages
accompanied w.t a spasmodic constriction of y. vessels on y. surface of
the body, we must therefore suppose y. Vomits prove useful in these by taking
off y. spasm — In y. 1.st & 2.d place Emetics are very dangerous in
congestions of y. head as in apoplexy & similar diseases. In cases of
this kind then, & indeed in a very plethoric habit it will be proper
to premise bleeding before we exhibit Vomits, in order to prevent
any bad effects y. might arise from y. violent straining y. often
comes on at y. latter end of vomiting —

Particular Emetics.

These differ in degree of acrimony & as their effects are more or less
partial or extended over y. system. I shall here enumerate them
~~in y. order~~ according to y. diff.t degrees of ~~mild~~ acrimony —
Warm Water is y. mildest of all Vomits, & may answer very well
when there is a Nausea or inclination to vomit. Large draughts
will then evacuate y. stomach, w.t out extending y. effects to y.
rest of y. system as much as other Vomits will. It is therefore only
in cases of y. kind y. it will answer, but it is insufficient when
we require y. other effects of Emetics. It has been thought y. it acts
on y. stomach merely by its stimulus, but this is not true; for on
kind y. an equal or larger draught of cold H2O will not have y. effect.
Warm Water is very disagreeable to our palate, & probably also to y. stomach
& it is on y. principle y. it occasions vomiting. Its emetic quality

by ye addition of ye
harmony & effect to
behalf of Man. Bef
the Man need. Man
Man if they are d
ly constitute or
of remember, I
What I have said
in my respect to
the proper done a
that ye it will com
that I said above
of an constitu
create a great
we should give
antages ye cann
ful speak of
on, Reason
dom employed in
ate Brilliance.
ith Virtue; bu
n mind. I shall
ty in its constitu
may be referred
harmony consists
W. y. A
Fr. perhaps
appears ye it

is increased by y. addition of oil, bitters or other nauseous substances
Next in Antimony & effects to these are Vomits of Mustard & Horseradish.
I have spoke of these before, it is therefore unnecessary to repeat
here what I then said. More acrid & more powerful than these are
Squills; these if they are dried & given in suff. dose will prove
as powerfully emetic as any of y. other acrid substances. Next in
virtues to Ipecacuanha, w. is y. most celebrated & universal emetic
I. is used. What I have said of y. effects & virtues of Vomits in general
applies in every respect to this, a repetition therefore would be entirely
needless. The proper dose seems to be from grx to ʒj. It has
been thought y. it will vomit equally well if given at grv. or less for
dose; but I said above y. we can never expect all y. effects from
small dose of an emetic y. we will get from a full one. If we
intend to excite a great sickness at y. stomach, w. only a slight small
emetic we should give them in small doses. This method is always
and w. advantages y. cannot be obtained in any other manner, &
I shall therefore speak of it more particularly under Tartar emetic
Longevity, Acarus & Medicine are y. most acrid of y. vegt. Vomits.
They are seldom employed in physick since Ipecacuanha has been in
troduced into Medicine. There is no substance y. excites to Vomiting
any specific Virtue; but they are all & each of them stimulants
& nauseous med. I shall next speak of Antimony, whose distinguishing
property is its emetic power, altho like other stimulants of this
kind it may be referred to under y. head of Cathartics, Diaphoretics &c.
Crude Antimony consists of 2 parts: a Regulus & Sulphur. It was formerly
supposed y. y. A. Fr. possessed some peculiar qualities; but by more accurate
experiments it appears y. it has all y. properties of common Sulphur, & ex. y. Virtues

of Antimony are bye & entirely in its regulus parts. There have been numberless methods been invented to obtain this regulus, & hence ye Variety of antimonial preparations ye we have in ye shops, wch are kept there as witnesses of ye great ignorance of ye physicians in former Ages, who ascribed particular Virtues to each preparation, whereas ye Virtues are entirely ye same, only one preparation has them in a higher degree than another. This regulus part, as well as all other metallic substances, cannot act on ye human body unless it be converted into a Saline State in ye or before it be taken into ye Stomach, or by ye acid ye is found there. The various methods by wch this is done ~~I shall defer describing, until I come to treat of Pharmacy~~ you will find in every Dispensatory & book of Pharmacy.

Crude Antimony. As ye regulus on wch ye Virtues as I said depend, is in ye state combined wch a great quantity of ☿, wch is not liable to be affected by vegt acids; antimony is often entirely inert & has very little effect on ye body. But as Antimony differs very considerably wch regard to ye quantity of ☿ it contains, & as it may sometimes meet wch a very strong acid in ye Stomach it may at times prove an efficacious remedy. It is still however an uncertain remedy, & has no advantages, where it does operate, over ye preparations ye are more efficacious & whose effects are more certain. But if we do employ crude antimony at all we should prefer ye tops of ye Cones, as ye contains more regulus, & reduce it into a very fine powder, by wch it is much readier acted upon by ye acid in our Stomach.

Pharmaceutical Vinum emeticum & Tartarus emeticus. In these Antimony is combined wch a vegt acid. The emetic Wine ~~con~~ varies considerably according to ye quality of ye Wine wch it is made; it is therefore uncertain in ye dose & you will hardly ever find in a hundred shops ~~two~~ ~~com~~ it ~~prepa~~ ye same entirely similar in its operation.

But of all ye preparations ye are made use of, viz: acid there is none more effectual & more sure in its operation than Tartar emetic.

Antimony & its various preparations have been employed for ye cure of almost innumerable diseases viz. in ye very opposite nature. It will therefore be difficult to give ye rationale of ye practice in every disease; I shall endeavour to do this as concisely & accurately as possible. Antimony does not seem to have any effects on ye fluids of our body; but its action is entirely confined to ye solids, ~~or rather~~ & it proves a very great stimulus to ye moving fibres. ~~It is very difficult and to know why one substance has ye power before another~~ We have hitherto by no means been able to discover why one substance has ye power in preference to another, & we are therefore equally ignorant on what principles Antimony acts as a stimulus. But we know ye all ye preparations of Antimony will stimulate ye stomach, & ye in ~~very~~ so small a quantity ye every preparation ye prepares very violent & all will quite vomiting. Physicians have been anxious to obtain some preparation ye will prove cathartic & diaphoretic without affecting ye stomach; but hitherto this could not be obtained & I question much whether we ever will have such a preparation of it. But ye stomach is not only part of ye body ye is affected by antimony its effects are extended over ye rest of ye system either by ye contact of ye bowels, or by giving antimony in such a manner, ye we avoid its action on ye stomach, & thus ~~give it an~~ have it applied immediately to ye other parts of ye system. When it is given in such a small quantity as not to affect ye stomach, it passes through ye bowels & acts on ye intestines. If we intend to have its purgative, not ye emetic effects, we must give it in small quantities & repeatedly, but never give

one dose before we have reason to think y. y. last is already passed into
y. Intestines: or else we must make use of such potions as are very
difficult of solution; these will then be dissolved in y. stomach by degrees &
pass in such quantities as to excite vomiting. The saline potions especially
if they be given in solution, will much sooner occasion vomiting than
those w. require some time before they are dissolved in y. stomach. On
this acct. we should always give Tartar emetic in solution if we intend
y. it should vomit; but if we expect its purgative virtues this necessary
y. it should be given in a pill or bolus. The effects of y. medicine as
before observed are not limited to y. parts to w. it is applied, but are extended
over y. rest of y. System. And it must be on y. principle y. Dr Pringle & Dr
Baker found antimonial emetics more efficacious in bilious fevers &
hypersthenics than Ipecacuanha. Acts as a sudorific in these cases in
[illegible] upon y. same principles with ~~when speaking of~~ Emetics in general. That is: not
only by its ~~general~~ virtue stimulating y. System in general, but also in a great
measure by its action on y. stomach, as there is a great sympathy between
this & ly. Skin; for y. sweat often breaks out long before it can possibly
be supposed y. ~~medicine~~ y. medicine can have been diffused over y. whole
system, & it is moreover given only in such small doses y. it cannot
be proved sudorific by being mixed w. y. whole mass of fluids. The chief
virtues then of antimony are: Emetic, Cathartic, Sudorific & Diaphoretic.
It sometimes also proves diuretic; this however is not often y. case, nor is
it very probable y. y. small quantity w. is generally given of y. medicine,
can be combined w. y. blood & afterwards again collected in y. kidneys,
to produce any great effects: this may happen indeed if very acid saline
potions be given of it, especially if the saline med. be ~~given~~ used at y. same
time. The Butter of antimony joined w. a solution of Sal: ammoniac
has frequently found to be diuretic. Tartar emetic may also sometimes
have y. effect, especially if it be given in cold weather, when the secretion
of y. kidneys is naturally increased.

some of ye. preparations of ~~Mercury~~ Antimony have also been said to promote expectoration, & ye. Hermes mineral has been greatly recommended for ye. purpose particularly by ye. French physicians. But I do not imagine ye. it has any remarkable effects ~~in the~~ as an expectorant: if it be given in a proper dose it will vomit & then as well as other emetics it may also communicate its stimulus to ye. bronchia. — I have now spoke of all ye. Virtues ye. are generally ascribed to Antimony. I am in ye. next place to speak of ye. diseases in wch. it is indicated pr. ye. Virtues it possesses & how it operates in those cases; but this I must defer to my next Lecture. —

In my last Lecture I spoke of ye. gen. Virtues of Antimony in general, & told you ye. ye. chief of these was its emetic Virtue. I am next to speak of its use & application in particular diseases: Vomits as I before hinted are constitute a very great part of our practice, Antimony may therefore on ye principle of equivocal Vomiting be employed in a great variety of diseases in wch. other emetics may also be indicated. But I can here in a more particular manner to speak of ye. Diseases wch. yield sooner & more effectually to it than to any of ye. other emetics. The principal disease is fever. It has always been looked upon as a matter out of all doubt, ever since Antimony was first introduced into physick ye. it was a most excellent febrifuge. It was first long kept as an arcanum & its use was almost entirely confined to ye. Chemists: these we know generally ascribed such cardinal & great Virtues to Antimony ye. exceeded all credit. But from later expts it also appears ye. too much can hardly be said in praise of ye. remedy in fevers. As this medicine excites vomiting & also proves purgative Physicians have generally imagined ye. it was by these means ye. it cured fevers, by evacuating ye. depraved & degenerated bile wch. they ascribed ye. primary cause of these

disorders. But this is a mistake, or it is at least not probable y. its chief effects are owing to y. evacuation, as we freqly give it in such a manner as to cause neither vomiting nor purging. We find it a most excellent remedy in y. Rheumatism & other inflamatory fevers; but neither in these nor in topical inflamations has it ever been thought y. they act by y. expelling depraved bile. We must therefore enquire into some other method of operation wch will at y. same time account for its effects in every kind & species of fever. I told you before y. this as well as other vomits throwed diaphoretic by y. action on y. Stomach, independant of being rejected wch y. fluids of our body. I have been had freqly had occasion to explain this to you I think it therefore unnecessary to make a useless repetition here of y. reasons wch show y. medn may prove antiseptic & diaphoretic by y. action on y. Stomach. The method of giving tartar emetic in these cases is simply this: We prescribe it in small repeated doses, & in such a manner as to make it equite nauseous wch out vomiting, by wch it will most certainly prove diaphoretic. When y. sweat once breaks out it freqly happens y. it lasts for several hours, & after then leaves y. skin is moist for a considerable time, & generally it gives y. patient one or two stools. Whilst it creates this nauseous sensation y. pulse is generally quicker than before, the tongue & delirium are freqly some what increased, but after a short time, especially if there is a copious sweat, y. patient falls into a deep sleep; after this y. pulse becomes slow & soft, & it becomes either so after or y. delirium goes off altogether. This is y. manner of its operation in continued fevers; to wch I have freqly seen y. three or 4 doses of y. medicine put an entire stop. The sickness at y. Stomach is generally so exquisite great, y. y. patient thinks he is at y. point of death, & I have freqly known them make solemn vows never to take another dose of y. Medicine; but after

y. operation is over they find themselves so greatly relieved & so much
better that they seldom wish for any thing more but to take it
again. It is also sometimes given in intermittent fevers. In
this case we prescribe it before y. paroxysm comes on, wh. y. intention
is, it should excite nausea & ~~vomiting~~ sweat, by wh. it generally ~~either~~
cuts off or at least mitigates y. paroxysm; & pretty if y. fever is an
irregular intermittent, & wh. is neither succeeded by a sweat or proper
intermission, this medicine given in y. manner first related will
bring it to a regular one & give us an opportunity to throw in
the bark. We may give y. Tr. emetic in these cases either in solution
or substance. In y. former case we can dissolve a gr. or 2 in a couple
ounces of water & give y. patient a spoonful of it every half hour
untill it makes him vomit once: this will give him y. proper dose
of y. medicine as y. we may next time give it wh. more assurance &
out this effect. If we give it in substance we make it into boluses
w. confects. of roses at grs. or grj. for a dose, & proceed in y. same manner
as wh. y. solution. You will ought to observe y. a ~~patient will~~ person cap. generally take
3 times y. quantity in substance y. he can in solution, & this for
reasons I gave you in my last lecture. Tartar emetic is not y. only
preparation of Antimony y. has been used for these purposes; & it
has always engaged y. attention of Physicians to find out some some
thing y. would more certainly have y. effect of exciting sweat without being
hurtful to cause vomiting. We know y. ipecacuanha is one preparation of Ipecac.
many things like specific virtues to cure fevers, they all have y. same
virtues, only one in a higher degree than y. other. And therefore
I mean to consider, wh. is a preparation of Ipecac. wh. I has nothing specific
in its operation, & is liable to all y. objections y. y. called preparations
of y. medicine are supposed to, wh. as I shall say more particularly

I have occasionally administered it in private practice, & found it attended with similar effects; at times no sensible operation whatever could be perceived from it, & at others it operated most violently, when I did not wish such powerful an effect from it; I had therefore laid the use of it entirely aside, especially as y. mode of preparing it was kept a secret — It is but lately that I have learned that their remedy no longer exists; Dr. James has been dead six or seven years, & as he died without disclosing his secret, it follows of course that what has since his death been sold for James's Powders, are imitations of it & consequently spurious — Dr. James had no doubt sufficient reason for not disclosing his secret, & in this probably consulted his posthumous reputation, for it is highly probable that he took his Medicine from some of y. many preparations that were made of Antimony when first introduced into Medicine & that he was not the original Inventor of it — This hath at least been the case with many who assumed to themselves the merit of inventing some powerful remedy which they vended for their private emolument, & when it was at length discovered what their medicine consisted of, it hath been found to be some ancient preparation which had gone into disuse & therefore considered by them as legal property.

in my Pharmacy, are freely nothing but a inert calx or capitt mortuum.
I have freqly seen it given w. advantage in y. Hospital & Ld. where
it was prescribed merely w. a View of making experts & coming at
y. knowledge of its real virtues: but it was always found to be
very inconstant & uncertain in its operation, & tho it freqly pro-
ved a most excellent remedy, yet it was often not attended w. any
advantages, & never had any effects but what could be obtained
from Tartar emetic & w. much greater certainty. ✠ The celebrated Rivi-
rius made use of an antimonial ~~fryption~~ joined w. Sal, & w. has been
called y. Antiquartanum Riverii. It has generally been observed y. antimonial
~~fryptions~~ were generally more efficacious in bilious, intermittent & continued
fevers, if they at y. same time proved purgative in a slight degree.
And it is probably for y. reason y. in y. Pedr. Cornachin: Scammony,
~~in James's Powder & prosp. rubr.~~ in y. Antiquartanum Riverii & Calomel
& Tartar emetic: Glaber Salts is added, in order to cause a ~~slight~~ gentle
evacuation by stool. It may perhaps be of service to y. former ~~fryptions~~ to
make some additions of y. kind; but I hardly can know Tartar emetic
taken w.out moderately purging, & an addition of y. kind must therefore
be useless. The famous Huxham has preferred Vinum antimonia-
le to all y. other ~~fryptions~~ of Antimony; but I must take notice here
y. y. is a very uncertain ~~fryption~~, y. it is very seldom found y. two
diff. ~~fryptions~~ of it will prove of y. same Virtues, & I am well persuaded
y. it is by no means either so certain an emetic or Cathartic as
Tartar emetic; w. is in my opinion y. most certain remedy y.
we can employ to overcome y. Spasm & break y. fever; And as
y. Spasm continues through y. whole course of y. fever, there can
be no period wherein this is not proper, & I have seen people
snatched in a manner out of y. Jaws of death, solely by y. use of y. excellent remedy.

I shall in ye. next place speak of ye. use of ye. medicine in ye. Dysentery.
It is not many Years ago since Ipecacuanha ~~first~~ began to be employ
ed to very great success in Diseases of ye. kind; it was therefore natural to
suppose ye. ye. other substances acting in ye. same manner would be
attended w. equal success. At first indeed it was imagined ye. Ipecacu
ana acted ~~for~~ by some specifick Virtue in ye. disease, especially as its
success was beyond expectation; but we now ~~for~~ certain ye. tis has
no such power, & its Virtues in this disease are entirely owing to its
action on ye. stomach, intestines & parts sympathizing w. them. It
has however been a matter that has afforded subject for controversy how
emetics ~~are~~ act in ye. dysentery & by what manner they effect a cure.
There is indeed no person but knows ye. they may be very useful & cure
ye. disease by exciting vomiting & purging & then evacuating ye. morbific
acrid matter; but this ~~their emetics~~ effects in these cases are by no means confined to
these Virtues; for it ~~to often~~ happens ye. we well cure ye. disease by giving
them in small doses when they neither purge or vomit; we must therefore
think of some other method to account for this; this is probably then
owing to ye. diaphoretic or sudorific powers w. ~~ye. effect~~ emetics, but in
particular ye. antimonial ~~septic~~ sudorific powers. For no body denies but ye.
is Dysentery as well as diarrhoea ye. perspiration by ye. Skin ~~is stopped~~
suppressed, & hence ye. sagacious Sydenham considered this disease
as a fever of ye. Intestines. Whether therefore a Dysentery be first brought
on by contagion, & ~~continued~~ kept up by some ye. peccant matter lodged in ye. Intestines,
it is still certain ye. ye. perspiration is impeded & ye. humour
w. should have been carried out of ye. body by ye. function, are determined
to ye. Intestines. Perhaps there is none of you here but what have
either experienced this yourselves or observed instances of it in others.
What is more freq. ~~than~~ if a person catches cold suddenly, by w. ye.

evacuation by y. skin is stopt, than to have a Diarrhoea & he is happy if this does not last above a day or two. If this happens in a moist warm summer, when y. humours are inclined to putrefaction, a fatal dysentery is often y. consequence. It is then a natural consequence y. restoring y. determination to y. skin, we ~~deprive~~ cut off y. source of y. ~~Dyscrasia~~ Disease, & by taking away y. cause y. effect ceases. Said before y. Ipecacuanha was generally employed for y. purpose; and I have rendered it almost certain y. its effects are owing to its diaphoretic powers, it must follow of course y. a medicine y. possesses in an equal or higher degree will be attended w. equal if not superior effects. ~~Tart~~ We should then from theory alone conclude y. Tartar emetic will in y. case prove a more powerful medicine, & accordingly find from y. experiments w. y. learned & ingenious Dr. Baker has made it in this disease, y. it is more effectual than Ipecacuanha or any other medicine for y. cure of y. disease. The Vinum antimonij has generally been looked upon as y. best preparation of y. metal for cases of y. kind; but I am very doubtful whether y. opinion is founded either on reason or practice. I own indeed y. this preparation is less soluble than y. others, & on y. acct. it will remain longer in y. stomach, for w. circumstance it stands a chance of being a more powerful diaphoretic & purgative than any of y. rest. But as its action entirely depends on y. quantity & nature of y. acid w. is present in y. stomach, its effects are very uncertain sometimes too great at other times trifling or none at all. And here I shall just mention y. that y. action of all Metals given in substance depends entirely on y. acid they meet w. in y. stomach, it must be very evident to you & to every person, y. y. effects must be very uncertain & dubious; w. is

not ye. case if we give some opinion of them. We may thence conclude
ye. Tr. emetic will be more effectual in ye. cure of ye. dysentery ye. ye.
Vtr: cerateum ye. & ~~the~~ I am now convinced by physical accurate
effects & instituted for ye. purpose — As this medicine has ye.
power in ye. dysentery of giving ye fluids a new determination, we
may conclude yt it will have ye. same effects in other diseases. Hence
it appears from phys. observations except ye. ye. Vitreum cerateum has been
employed w. great advantage in ~~x~~ hemorrhages of ye. Uterus; & we
may, for ye reasons just now given, conclude ye. ye. other preparations of
antimony particularly Tartar emetic, may be given w. rather greater
advantages. But I in ye. case it cod can by no means imagine yt
it acts by expelling ~~some~~ any morbific matter, but it is highly probable
ye. it ~~acts~~ proves useful by ~~giving~~ restoring an equal circulation of ye. blood
to all ye parts of ye. body, & by taking off ye spasmodic constriction
of ye. surface — I shall just observe here ye. perhaps in Hemorr-
hages & Dysenteries ~~the~~ ye ~~antimo~~ Tartar emetic would prove much
more effectual if it were combined w. Opium. For ever since
Dr. Dovers powder was communicated to ye. World, w. is a combina-
tion of Ipecacuanha & Opium, it has been an established fact ye. they
combined w. opiates ~~will much~~ are more effectual sudorifics than
the given separate, & ye. ye. Virtues of ye. one are improved &
lightened by ye. addition of ye. other. — Upon ye. principle opium
has been combined w. ye. antimonial Wine, & ended ~~it~~ this form
an most excellent sudorific medicine; & I do not in ye least doubt that
giving it w. Tartar emetic would give us a remedy of equal &
perhaps superior Virtues. —

The deplorable Victims of
in Sporadic & epidemical of
of these various diseases
for having hitherto been
have been not yet been
Science of this kind. It is
and of intense complaints
almost chiefly on those whom
other have been found of those
of pharmacy cannot or prove
are no effect on the fluids or
must consider the operation
on us. There is either a poor
blood, or the depraved humours
are expelled out of the body. To
employ such systems of action
of the other medicines, or
others of same kind. It
evidently from the sulphur
are not only renders it explic
the more universally to the
in each Bowel & Nostrum of the
not be seen, yet all
a much more effectual
should therefore be preferred
of Mercury or any other

The diaphoretic Virtues of Antimony are further confirmed by its use in foulness & diseases of y. Skin. The Skin is liable to be affected w. many y. those various disorders. The Variety of them indeed is so great, y. for m having hitherto been able to investigate y. causes of all of them, we have even not yet been able to give names to every individual disease of y. kind. It is scarce necessary to mention y. use of antimonial med. in these complaints, as every Author & every practitioner depends most chiefly on them whenever diseases of y. kind come in question. It has been found y. those ~~med.~~ preparations are most serviceable y. are least apt to purge, vomit or prove diuretic: and as I observed before y. y. medicine has no effects on y. fluids or cannot induce a change on them; we must conclude y. it operates wholly by increasing y. insensible perspiration w. then is either a free circulation given to y. blood in y. Vessels of y. skin, or y. depraved humours y. are stagnating there & becoming ~~turning~~ acid expelled out of y. body. For y. diseases of y. kind Physicians generally employ such preparations of antimony y. have no acid in y. composition, as y. Regulus medicinalis, Kermes mineral, Sulphur auratum antimonii & others of y. same kind. Dr. Pearson, a late Professor of Chemistry at Edinburgh joins y. Sulphur auratum w. ℞ salicis; y. antimony in this case not only renders y. exhibition of ℞ more safe, but also determines it more powerfully to y. skin, whilst y. ℞ by its stimulus increases y. sudorific Virtues of y. antimony. But tho we thus have a very good medicine, yet all y. ~~preparations~~ compositions of Antimony prepared w. an acid are much more effectual than those y. are prepared w. out one, & should therefore be preferred to y. notwithstanding we combine them w. Mercury or any other substance. This I do not here speak only for

Theory: undoubted facts & experts show y. y. Vinum antimoniale, emetic tartar & butyrum antimonii are very effectual in diseases of y. Skin. We should therefore rather combine y. 4 w. these preparations, by wh. I imagine y. y. Virtues of either will be remarkably increased & will be very useful in diseases of y. Skin, but also promise as happy effected medicine in y. Lues venerea or pox. — As then the preparations of Antimony have such great Virtues in exciting Vomiting, purging, sweating & y. discharge by urine, & as we find it has been attended w. very great success in many of y. most obstinate & fatal diseases, we may justly look upon it as one of y. most capital remedies of our materia medica, & wh. wh. a judicious & Dentive physician will perform Wonders. — My method of giving Tartar emetic as a Vomit is to dissolve four or 6 gr. of it in 6, 8, 10. or more Ounces of Water, & letting y. patient take two or more spoonfuls of y. solution untill it vomits him. This is a most agreeable & very powerful emetic; by dissolving it in a large quantity of Water I have it entirely under my management exciting Vomiting as often & to what Degree I please; & after y. operation is over it will prove a more powerful Sudorific than any other. I am not under the least apprehensions of any bad consequences from; Children may take it with equal safety as Adults. And here by y. by I cannot help observing y. Children bear no evacuation better than Vomiting. Nature has for very good purposes furnished them w. a very irritable Stomach, wh. if it be even too much distended w. y. milk of y. mother nurse will be stimulated to contraction & evacuate its contents. There can therefore no remedy be better adapted for y. diseases, wh. generally consist in an acid in y. Stomach, & wh. priming & purging, than emetics,

ds. they will often take for many days successively w.out being in
e least reduced by them; whereas purgatives bring them down in
a very short time. I would recommend it to you to read a paper
in y. London medical essays on y. subject. I am convinced you
will be highly entertained & improved by it. I must however
tell you y. there is one inconvenience attends y. too freq. exhibition
of Vomits, & that a very considerable one: they weaken y. tone of y. Sto,
mach

The ~~next~~ Class of med.s y. next comes under
our consideration are y. Cathartics, w.h are such substances as any
cause y. evacuation by stool. They have been called Cathartics or
Purgatives by way of eminence & from a mistaken notion y. they carry
off all y. impurities of y. body: but this term should only be
considered as metaphorical. I shall here in y. same manner as
I did under y. Class of Emetics, take notice of y. general Virtues &
effects of purgatives, & afterwards treat of each in particular.

They evacuate y. ordinary or natural contents of y. Intestines. As y. is
a necessary operation of y. animal oeconomy & as it not occasional or
accidental in y. same way as Vomiting, the med.s of y. kind have generally
been looked upon as friendly or agreeable to Nature.

Cathartics besides evacuating y. Intestines ~~excite~~ excite or occasion a more active
peristaltic motion; by w.h y. glands of y. Intestines are emulged &
squeezed out, & a larger afflux of humours to y. Intestines is thereby
occasioned. This appears very evident at y. end of y. operation of
any purgative, when nothing almost is evacuated ~~by~~ but y.
serum & mucus of these Viscera.

3. As they operate on y. whole alimentary canal, they also draw down y. humours from y. Stomach. I shall afterwards, when treating of y. particular purgatives, consider whether any of them have a peculiar quality to purge y. stomach. From y. 3 considerations it must be evident y. their virtues as evacuants must be very considerable. They also drive or encourage y. discharge of y. fluids from all y. glands in y. intestines & there y. pour their liquor into them; particularly y. pancreas & liver. By quickening & expediting y. circulation in y. liver they have also some effect on y. spleen & other abdominal viscera. If there be a certain connexion between secretion & absorption, y. absorption will be carried on in proportion as ~~absorption~~ secretion is encreased, they by augmenting y. latter will promote y. former. For this y. foundation they have been called Hydragogues: w. ~~means~~ implies, they not only evacuate but also cause y. absorption of Water or fluid has stagnated in any cavity. — From considering y. operation there med. in y. light, they may be called Cathartics, & if y. evacuation is continued for a considerable time, they may in some measure be called ~~since y. means~~ of purgers, as they then drain y. whole body. But we cannot keep up such a constant evacuation unless by ~~giving~~ repeated exhibition of acrid med.: this is a dangerous practice, & ought be entirely confined to persons of a lax & flaccid habit: & even y. upon y. whole they do not deserve y. name of purgers or cleansers of y. body. ~~They~~ It has been a practice to come to cure dropsy by ply. & repeated purging; but I do not think y. it is possible continue them for such a length of time antill we change y. composition of y. fluids: at least not without ruining ~~destroying~~ shattering y. system. And hence, as I before observed, when speaking of ~~y.~~, it is

safer to employ Salivation. It is true ye. a salivation is attended w.
inflamations & other inconveniencies; but these are nothing in comparison
to inflamations in ye Intestines & ye racking pains ye nature generally
bind such a purgeing course.

By encreasing ye. evacuation by stool & causing a derivation to ye.
Intestines, it necessarily follows ye. ~~more~~ a greater quantity of blood is
determined into ye descending aorta, by wh. a revulsion is made from
head, & other evacuations may be encreased; & therefore ~~make an~~
~~add bad~~ Cathartics may w. some probability be considered as promo-
ting ye. menstrual flux, removing or opening obstructions in ye Uterus: they may
become useful in Gonorrhoea by washing of ye virulency & be serviceable
ulcers by evacuating ye system in general, & be a means of curing
them in ye inferior parts of ye body by causing a determination of ye
blood to those parts, & thus contribute to ye formation of good pus.
Cathartics poss. a stimulant Virtue, by wh. on being applied to ye
Intestines, they some times excite, & generally aggravate inflamation
those parts: Some of them indeed will propagate ye stimulus
over ye rest of ye System, & thus prove hurtful in inflamations. Purgatives,
least ye generality of them will on being conveyed into ye Mass of
blood prove diuretic & pectoral. These are ye Operations & effects of
Cathartics in general —— If they are given freely they diminish
tone & sensibility of ye Intestines & thus by this means & partly
also by encreasing evacuation, a freq. use of them renders ye Intestines
ble to irregular spasmodic affections. On this acct. then they are
ly hurtful. In ye 2d. place as ye acrimony of most purgatives
of an inflamatory nature, they not only if given too copiously excite inflamation in ye
nt to wh. they are applied, but act in ye same manner as poysons.

Some Narcotics, such as Tobacco, are reckoned purgative; but it much oftner happens y. purgatives prove narcotick. — 3. The inflamatory stimulus of purgatives is extended to y. rest of y. System & produces or aggravates fever & y. inflamatory diseases. 4. This inflamatory stimulus is directed more particularly to y. rectum, ~~through w. y. whole and~~ as they in distance must pass through y. & the comes immediately in contact w. it. Hence all purgatives encrease hæmorrhoidal swellings or y. piles. They not only inflame y. rectum, but also extend y. irritation to the bladder, & hence a strangury is often excited by mild purgatives. The effects of purgatives ~~are~~ therefore more or less ~~in~~ according to y. particular substances y. are employed: of this we shall have an occasion to treat more particularly under each substance, ~~as~~ this will be y. subject of my next Lecture.

Particular Cathartics.

These are of 2 kinds: 1. Such as are generally called Laxatives or Eccoprotics, & operate w.out any manifest stimulus. 2. Those y. are of a more acrid kind & operate in consequence of y. acrimony they contain. I shall enumerate them in y. order of y. virtues. In y. first place I mention y. fructus acido-dulces, such as Prunes, Tamarinds & Cassia, Butter Milk & y. Vera Canda or acescent Vegetables. All these are purgative in consequence of y. acescency in y. stomach, this coagulates w. y. bile forms a combination w. y. bile & stimulates intestines & to a more frequ. evacuation. These afford us y. most gentle & cooling Laxatives, highly proper therefore in most fevers, where our intention is only to encrease y. evacuation by stool or to keep y. body open & lax, w.out stimulating y. patient. Common Water if it be taken in considerable quantity also proves Laxative: for by

bulk it increases y. peristaltic motion, by wch y. intestines push forward
y. contents faster, & prevent so great an absorption as would
otherwise take place. In this manner y. many mineral waters act
& prove purgative. — Bland expressed oils also prove laxative
if they are taken in such quantities as not to be liable to undergo
any changes in y. Stomach. Imagine y. they also act chiefly by
y. bulk, & y. it is by this y. they prove serviceable in y. Colic
Pictonum. The castor oil is now most freely employed in this
disease, & a less quantity of this will purge than almost of any
other oil. The castor oil is obtained by expression or decoction from
y. Semena Ricini or Palma Christi, wch are very poisonous &
y. most violent purgatives almost we have in Nature. It is probable y.
y. expressed oil must partake some of y. Virtue, tho it is not
susceptible to our Organs of taste & smell. Soap may also be
considered as a purgative, for tho it be mild to y. taste, yet it has y.
power of stimulating y. Intestines & proving laxative. It will sometimes
give y. effect when given only at ℥j for a dose, at another time no manifest
purgative effects are obtained from it tho given in y. quantity of ℥ij. This gives us
some reason to imagine y. it only purges when decomposed in y.
Stomach. Next in order we may place Sulphur. This in its pure state
is mild & bland, & tho it be so yet it has a manifest power to stimu-
late y. Intestines. Its manner of operation has by no means been
hitherto accounted for, & it is uncertain whether our fluids have y. power
of dissolving it or not. It is certainly a mild & safe purgative; it never
produces any considerable evacuation, but keeps up or rather some-
what increases y. natural secretion, wch out either irritating or heating y. sy

tem. It is therefore employed w. great advantage in those cases where costiveness increases y. disease & where irritation or ~~irrita~~ stimulating purgatives aggravate y. symptoms. This is in particular y. case of uterine & hæmorrhoidal hæmorrhages. In these cases then Sulphur of Iron is a very excellent ~~purg~~ laxative. ~~In y.~~ The piles are generally attending w. costiveness, & y. parts about y. rectum are at y. same time so tender y. we ~~cannot~~ by no means introduce a glyster pipe & therefore ~~must~~ in these cases by. medicine is extremely useful. It has however been said y. it freely gripes y. person. This imagine only takes place when deliquesces or liquifies, w. it is ~~very~~ apt to do. In y. case its purgative property disappears & griping takes place. We should therefore always be very nice in our choice of ♃, & only use such w. is in a mild state or washed flowers of ♃. The seeds of Mustard may also be employed as a laxative. For y. purpose it must be given at ℔ss or ℥ij for a dose and repeated 3 or 4 times a day. I have known many cure pills if given in this manner, w. out y. assistance of any other remedy whatever. And I believe there is few remedies equal to it for y. cure of y. chronic Rheumatism. Next to Mustard I shall take animal Bile. This you know is by nature intended to be mixed w. our aliment after it has passed y. Stomach & by proving stimulus to y. Intestines expedites y. expulsion of y. fæces. It has for y. reason been recommended in those diseases in w. there is a deficiency of y. natural bile, particularly in y. Jaundice, as it was thought a substance of a similar nature w. y. human bile would stand a better chance of being attended w. success than any other medicine.

but it has hitherto not answered my expectations, & I never could observe any sensible effects from it, tho ~~I have given it~~ Zjss of inspissated bile, made into pills, was given for a dose. The next in mildness are ye saline purgatives, & of these ye mildest are Sugar, Honey, & ye sweeter fruits, wch tho not strictly saline, have yet much of ye nature & property of Sugar. It does not indeed seem ye they prove purgative on acct of ye Sugar in its saline state; for they are less so than Manna; but they undergo an acescent fermentation in ye stomach wch they acquire ye ~~pur~~ laxative virtues. The next set of purgatives may be referred under ye head are ye Neutral Salts. These are indeed the stimulating in ye Intestines than any of ye former, but they do not communicate ye Stimulus to ye rest of ye System & hence they have always been looked upon as refrigerants, & in ye common phrase are called coolers of ye Blood. It is ye Epsom & Glauber Salt ye are chiefly employed for ye purpose; but as we have them in ye shops there is neither of them deserve ye Name wch they ~~have~~ bear: for neither ye one made from ye saline Waters at Epsom, nor is ye other prepared after Glauber's directions. Both are made from ye Brine ye is left in pans after ~~making~~ boiling of common Salt, & ye Sal Glauber ~~only~~ differs in ye other respect from ye Epsom but ye it is ~~in~~ large Crystals, & on ye acct is so liable to be striped wch Impurities are ye other. We generally give them where a large & sudden Evacuation is wanted, & where we do not chuse ye ye System should be much affected. Thus in ye beginning of fevers if ye body is costive these may be employed wch propriety. Dr Heberden of London also advises them in ye Plethora or obstinate costiveness

ds. Strong purgs he ob
ters, cordials y. food
hour with the desire
l of indulative diet
y. stomach whence
ted by vomiting all
thes, for these were
would be timely cally
, was proper before
lementary canal. I
Dative nature by y.
ediseases to flatulence
by secondrice compla
out on y. stomach, f
ll have an opportuni
therefore defer saying
a word from
reath of these ~~you~~
ulcus. Then may a
y. use of all other m
na cauda, ~~as they~~
lungatus, & Cardomil
a degree as fully fr
Of you in disc
ll now take up
ations than then an

ps. For ye purpose he dissolves 3ss of Glaubers Salt in 4 or 6 Ounces of
water, & orders ye patient to take a couple of spoons full every
hour untill the desired effect is obtained. All Neutral Salts possess some
of a sedative virtue, & therefore ye solution will sometimes stay
ye Stomach whenever other purgative medicine will be immediately
rejected by Vomiting. It is however necessary to give it in small & frequent
doses, for if we were to give it at once, there is no doubt but ye
would be immediately rejected by Vomiting — Physicks of Salts are
ly improper where there is a weakness of ye chylopoietic viscera
alimentary canal. I just now observed ye they were of a refrigerant
sedative nature: by ye they relax ye tone of ye Stomach & Intestines,
indispose to flatulencies. For wh reason we should never give them
hypochondriac complaints, nor where ye person is subject to have
Gout in ye Stomach; for they will most certainly increase ye disease.
shall have an opportunity to speak of these again in my Pharmacy, &
will therefore defer saying any thing more on them at present, and proceed
to speak of those ye purgatives ye are attended wh an inflammatory
stimulus. These may again be divided under those ye are acid & into
those ye are of a more mild nature. Under ye latter we refer all ye
manna called, ~~as they~~ of wh I formerly treated. All of them are more or
less purgative, & Chamomile flowers in particular have ye quality in
such a degree as frequently prevents them from being effectual in Intermittents. Of ye use in diseases I spoke very fully ~~at~~ under ye head,
shall not now take up your time wh a repetition. More powerful
purgatives than these are ye fœtid Gums, wh I recommended under ye head

Antipyrenodine. Effectiveness
of Powders of Aloes. Aloes
is a very strong
purgative. They have a p

Also

ted you in my former
as more peculiarly
medicine, I can say a
fers its critical effects
purgative, & therefore
if. Aloes would prove
good purpose if it
give it: it could in
considerable evacuation, or
keep down it will have
violent purging, i.e. it
before a very safe & e
indicated before it prescribe
critical evidence; for
nature will not act
on, & will not produce
and Dr. eg. If I give
measure have
prove effect at all
effect on them, but there
the medicine can be given
Dr. Aloes cannot be comp

Antiphrasmodics. Assafoetida &c. They all approach in purgative virtues
y. Nature of Aloes. Tho there are bitters, & tho bitters be purgatives &
tho Aloes is a very strong bitter, yet it is not as bitters that they prove
purgative: they have a peculiar quality by wch. they have y. effect

Aloes.

I told you in my former Lecture y. ~~some~~ Authors considered some purga-
tives as more peculiarly adapted to act on y. Stomach: if there is any
medicine y. can lay a claim to y. title, Aloes is perhaps y. only one.
It differs in several respects from all y. other substances y. are employed
purgatives, & therefore is well adapted to many particular cases in
wch. y. others would prove hurtful. In y. first place it acts almost to
good a purpose if it be given at 6 or 7 gr. for a dose than if we were
to give 20: it will in either case do no more than produce one
considerable evacuation, or perhaps at y. utmost two. & if we give it in
large doses it will have y. same effect, unless it be attended wch. very
violent griping, wch. it will not be at all in y. former case &
therefore a very safe & agreeable purge in many cases. It is chiefly
indicated where y. peristaltic motion is not regular, wch. often y. cause of
habitual costiveness; for wch. we have no better cure than Aloes. Most
purgatives will not act unless they are given in y. full & competent
dose, & will not produce half y. desired effect if given in half y.
usual dose. eg. If I give only 2 ozs of a Neutral Salt wch. as a purgative y. it shall produce only
or 2 evacuations
produce have no effect at all. Tho cure may indeed by large dilution obtain
effect from them, but then these, Aloes & y. flowers of Sulphur are y. only purga-
tive med. y. can be given in this way. There are however some cases
in wch. Aloes cannot be employed. It stimulates y. rectum more than

any other purgative, & has therefore w. justice been accused of exciting ha,
morhoidal swellings or piles; we ought therefore never to use in these
cases, unless it be w. an Intention to promote them. The Dr.
Stahl & his followers, from a notion y. y. piles were always a salutary
formation, endeavoured by all possible means to encreed y. on; for
w. purpose they found y. aloes & ~~pp~~ preparations of Aloes y. most proper med.
or besides its ~~power~~ virtue of stimulating y. rectum it also has y. power
of rarifying y. blood & by this means encreases y. uterine flow, as
well as it brings on y. Piles. Aloetic purgatives are therefore recommended
by most practitioners in obstructions of y. Menses: they are
in y. case given only about a week before y. period in w. y. Menses
~~to come on~~ are expected comes on; & by rarifying y. blood &
its particular stimulus in y. pelvis it greatly has y. effect of ~~causing~~
bringing on y. discharge. I observed before y. it was y. best purgative
in habitual costiveness. This costiveness generally accompanies
y. hypochondriac disease, in w. there is at y. same time a debility
& relaxation of y. Viscera, for w. y. patient is subject to flatulencies
& spasmodic affections in y. abdomen. I told you before y. saline
purgatives were improper & y. medicine is perhaps almost y.
only useful one in these complaints. It gives a gentle stimulus
to y. parts: by its bitter it proves a tonic: & as y. hypochondriac
is frequently attended w. y. piles, and is always aggravated by a suppression
of these, this medicine by promoting them, greatly contributes to
cure y. disease. In this case we should give it Evenings at bed
time. 6 or 8 gr. for a dose made into pills, & then it will procure one

or two evacuations next Morning. Its effects are entirely analogous to those wch. we observed from taking Andersons or Dr. Scots pills, a famous Quack medicine. Two of these are ~~frequently~~ always taken for a dose, each pill weighs 2 gr. & by frequ. trials I am convinced y. they are nothing but Aloes, or y. y. effects are at least entirely owing to y. Aloes.— Balsamics or Balsams may also be given wd. a view of evacuating y. Intestines; for they stimulate them and are in Virtue equal to y. Aloes: they are very proper to overcome a costive habit & are particularly useful in Costiveness y. is attended wd. violent spasms, wch. in y. Colica Pictonum or dry belly ach: they are more heating to y. system than y. former & produce y. most copious evacuations. Those wch. are generally made use of are y. antiseptic Balsams of Turpentine: Balsam Copaiva & Gum Guaiacum. Turpentine is not very proper because it is very difficult of diffusion. The most convenient & also perhaps y. most efficacious of them all is Gi Guaiac: this is found a useful purgative in all cases of obstinate & habitual costiveness, in which there is nothing to be feared from its heating quality. But we must be very accurate in preparing it, for if it be given in a coarse powder it will have little or no effects as a purgative. We are then first to reduce it into a very fine powder wd. Sugar & afterwards mix it wd. a Mucilage or Yolk of an Egg so as to render it soluble or at least diffusible in ℣, & giving it in such quantities and freq. repeated untill it has y. effect. Dr. Pringle has observed y. it is one of y. most effectual cures for y. chronic rheumatism. I have hitherto seldom given it without some addition. It generally by y. above treatment dissolves ~~it in~~ about ℥j or ℥ij of it in ℔ivij of Water, to wd. I add 2 or 3 gr. of Tartar emetic. This

is a very powerful medicine. Two spoonfull every 2 or 3 hours will
give ye patient 2 or 3 stools in 24 hours, prove gently diaphoretic,
& very effectual in chronic rheumatisms; provided they are not
attended w. constant fever. — I have omitted some other substances w. have
usually been looked upon as purgatives & ranked along w. ye milder
sort. Violets & Palerous are of ye same; but ye purgative virtues
are very little to be depended on. Polypody has also no considerable effects
in causing an evacuation of ye Intestines. I know ye it will pretty
well operate if ~~given~~ ℥j of be given for a dose. — We are in ye next
place to speak of ye liquid purgatives: these seem to differ from one another
according to ye diff.t degrees of acrimony & hence they have by some
Writers been distinguished into ye Cholagogues, Phlegmagogues &
Hydragogues —

Rhubarb. This has besides its purgative virtues also an astringent quality
hence it is peculiarly adapted for ye cure of ye Dysentery; & by ye bitter,
wh. is combined w.t it, it is also employed w. advantage in
debility of ye chylopoietic viscera. The Russian Rhubarb is preferable
to ye wh. is brought from other Countries. ~~We have~~ It is only w.in a
few years ye we are acquainted w. ye plant ye ~~fomes~~ furnishes ye
root to our shops: & a few plants are growing in ye Gardens in &
near ye City. As it is so valuable a drug, & ~~may~~ in all probability
might be raised in ye Country I shall here give you ye history of it.
It is by Linnaeus in his Species plantarum called Rheum palmatum,
from ye figure of ye leaf wh. resembles in some measure ye palm of
a hand. It has hitherto not been discovered to grow any where but

in China ~~inde~~ near ye famous Wall of ye Country. It is collected by ye Kalmuc
& other diff. Nations of Tartars & by them carried into Turkey, Persia
Russia & Pekin, ye capital of ye Chinese Dominions. From this
place it is further carried to Canton & other maritime places, where
it is by ye Indian Ships brought into Europe. But ye w. is brought from
China by land is greatly superior to what is brought by ye Ships, w. is
ten spoiled by being kept close too long, by being mixed or surrounded
with a number of other goods, & by ye heat of ye Vessel. The Russians & Persians
bring it by land from China upon Camels: they wrap ye Root up in
cotton to prevent ye too great influence of ye Sun, if it in time hot
climates. The Russians bring their in ye Winter season from ye borders of
China to Moskau & Petersburgh. The russian rhubarb, or ye w. comes by
ye way of Russia ~~bar~~ is much preferable to any other, as ye Russians
take particular care about purchasing & preserving ye best roots: The Empress
gives her express commands for ye purpose & ye College of Physicians at
Petersburgh take care to see them executed. An Apothecary is sent by
the Empress to China, accompanied by a Commissary: he is to buy all
the rhubarb ye is brought for sale, either good or bad, & ~~give~~ deliver it
to ye hands of ye apothecary, who has orders to transport it at ye utmost
expedition to Kiachta ye last Frontier town in Russia. He is to keep
it under a shed erected for ye purpose, w. defends it from ye Rays of
the Sun & from rain, but permits ye free access of air. He then sepa-
rates ye good from ye bad, & after having examined it very accurately
for several days, he commits all ye bad to ye flames, lest it may not
fall into ye hands of some avaricious or selfish people, who would

ot fail to sell it to y. highest bidder. The good he dries carefully &
separates it from all dampness & filthiness, then packs it up to
transported to Moskau & Petersburgh. As soon as it arrives at y.
place it is unpacked & another Apothecary again examines it very
carefully, separates all y. bad y. might have escaped y. former search,
& if any y. has been spoiled during y. transportation. And thus y. best
ly is preserved for use & for y. european Markets. You may know
good rhubarb by y. following marks: It must be of a reddish yellow
lour, & very dry; friable, but w. some hardness: thick & compact &
e roots y. resemble in some measure a Horse's hoof, or round
bed: Upon being broke it must be variegated with pale red & white
aks or line, in y. manner of a Nutmeg. It is necessary to keep it
a dry place, as it is very apt to be wormeaten. It is an expellent
tomachic, & particularly serviceable in diseases of children, w. are generally
ing to an acid in y. stomach. It is not in these cases to be given
ate to purge, but just to keep y. body open

Senicka or Broom. I spoke of y. virtues of this in Dropsy under y. head
f Antacids. The tops given in Infusion will prove purgative; & it
s one of those y. at y. same time expell flatulent Wind, w. is often
troublesome in y. Cholick

Senna This is reckoned by some to be one of y. best purgatives; but
have hitherto not been able to discover any advantages y. it might
ave above other substances of y. kind. It is as acid & inflamatory
s most of y. others. It ought to be infused in a large quantity of V. for y.

Senna is preferable to ye decoction, as ye purgative virtue resides in a volatile part wch. ~~flies off~~ evaporates by the boiling. If ye volatile part be obtained infused in a large proportion of water, it operates more gently than any other preparation. The bitterness of Senna is corrected by ye juice of lemons & cream of tartar. Aromatics, particularly ye seeds of coriander are sometimes added to prevent ye griping wch. Senna is apt to occasion.

Helleborus niger. This is commonly placed amongst ye most acrid purgatives; but it is very uncertain in its operation. I have known it purge very briskly at times in small doses, whereas ~~at other~~ on other occasions it wch. should have no effects at all. This must probably be owing to ye variety of ye Medicine, wch. is perhaps not equally efficacious at different seasons of ye year, & if taken up at some particular time probably proves little or no virtues. Dr. Mead has also recommended it as a powerful Emmenagogue, but I have never seen it have any considerable virtues in these cases.

Ipecacuanna, ye Jalap & ye Scammony are all species of ye convolvulus & belong to ye Convolvulus. The Ipecacuanna is a very mild purgative & has little or no sensible taste. It is now mild from made use of & has given place to Jalap. This is one of ye best purgatives ye we have in ye Shops; it is less griping than Senna, & not more violent in its effects. It is also remarkably diuretic, if given in decoction, for boiling dissipates its acrimony. This ye purgative ye is most frequently used in Dropsies. I give it in this manner for ye Diuretic. Take powdered Jalap 36 gr. Calomel grij. Make ~~the~~ this into 6 pills of equal Weight. The patient is

to take ye first at 6 or 7 O'clock in ye Morning, & continue taking one
ry hour, untill they are all taken, unless ye purging becomes vio-
lent — By giving it in this successive manner it is attended
advantages ye we cannot by no means obtain by giving a full dose
once. It is not so apt to gripe, its operation is more gentle &
think at ye same time more effectual: and I have seen it attend
in reducing ye swelling
d w. surprising effects greater indeed than I could possibly have
expected from any medicine whatever

Scammony is ye inspissated Juice ye flows out from a root of ye
convolvulus. It has always been esteemed one of ye most acrid purgatives,
& very seldom taken by itself, but generally combined w. some
other purgative substances. It is not disagreeable to ye taste, & should
difficed in V. It seldome comes genuine to us: We should therefore
deavour to substitute some of our own productions both for this
& Jalap; especially as we have some plants ye resemble them
much in external appearance ye they can hardly be distinguished
from each other; & I make no doubt but they possess similar virtues.
Colocynthis, Cucumis Asinigrus, Elaterium & Bryonia alba all belong
ye natural order of ye Cucurbitaceae. They are ye most acrid purgatives
ies we have, & now very seldom employed; tho they may be deprived
ye scammony by boiling as its resides in a volatile part.

Diuretics. These are such medicines as promote
e discharge of Urine. The effects of these in ye body are very uncertain.
ere are many medc. enumerated as having a diuretic quality, but there is
not one of them w. will always expect it, or prove considerably so. Their
action very often depends on chance. There is not a more powerful

stimulus to y. Kidneys then Cantharides & yet these will not always
encrease y. discharge of Urine, tho they seldom fail of producing a strang
y. The reason y. med. of y. class are so uncertain in y. operation
probably is owing to y. difference in all med. must necessarily undergo
not taken up into y. mass of blood. These have also been many med.
counted diuretic because they were found useful in Diseases of y.
Urinary, tho they at y. same time perhaps had not y. least virtue
diuretics. There are many astringents besides y. Uva Ursi y. have
been looked upon as diuretic, & tho I do not doubt but what they may
at & perhaps accidentally encrease y. discharge of Urine, yet I am well
convinced y. they do not by any means deserve y. title, & y. for one
they prove diuretic they may be given 10 times w.out producing
effect. It has been supposed y. y. Virtues of these med. depend on
power of changing y. consistence of our fluids; but y. is an erroneous
opinion, & I am well assured y. they all act either by immediately stim
ulating y. kidneys, or by parts y. sympathize w.th them. I might
adduce many instances fm w.ch it appears y. y. kidneys are liable
be affected by consent but one or two will be sufficient: During a
paroxysm of y. hysterics there is a copious flow of limpid urine, they
vitric complaints will excite vomiting. It is also from y. action on
Intestines y. y. Stimulus of fourgatives is communicated to y. kidneys by
they prove Diuretic. It has been generally supposed y. it is only saline
Substances or at least y. saline parts of med. y. stimulate y. kidneys;
tho it is for y. most part owing to y. yet y. effect should by no means
limited to y. saline part. Any acid substance, such there of an
ly nature will prove diuretic at times.

General effects of Diuretics.

they evacuate Water, not or y. Serosity of our Blood; by w. they cause an absorption
of y. Water accumulated in any quantity & stagnating in y. Cavities.
y. act. they have been supposed to cure dropsys; but their stimulus
is general too gentle a work for y. purpose, & we do not succeed so often
them in y. disease as has generally been imagined.
Tho' y. watery part they evacuate also y. saline & putrescent parts of
blood, & hence all diuretics are useful in y. Scurvy.
They also sweat out all y. extraneous bodies in y. serosity. Hence they
be useful by evacuating every sort of acrimony.
we could always be certain of y. operation, y. help of Med. would
of inestimable service in ~~physick~~ curing of diseases; they may indeed some
be useful when we cannot perceive any sensible effects from
y in this case they are diaphoretic; w. all diuretics pretty are. In
to forward or expede y. operation we should always give them
tly diluted y. they may be sooner determined to go off by y. urine
stances. This should always be done except when we give them
cure dropsies; but it is not very certain whether even in y.
a large dilution would not ~~compose~~ the proper. I remember an ~~instance~~
of a woman in y. Hospital at Edinburgh, who laboured under
Dropsy, w. had defied all y. most powerful meds. y. are generally
lled for y. cure of y. disease; but by taking large Quantities
a mineral ✓ such an evacuation of ✓ was brought on, as soon
lived her from y. disease. Similar Instances are related by ~~oth~~
thors of Credit. I remember one in particular where y. patient had
n despaired of by his physicians, & who expected it as a ~~strong~~ last
vour from his Wife y. she would help him to get to a spring
he might once more before he died quench his insatiable Thirst.
The Wife could not refuse him y. request, & w. much difficulty got him

forring. He drank as much Water as he possibly could, wch. encreased his
illing to an enormous size, but even brought on such a Vomiting
ing & discharge by Urine, yt. he was almost entirely free from yt.
ase in 2 days. It is therefore I think still doubtful whether yt. learned
wch. hydropic people have for drink is not an instinct of Nature,
by indulging them at least sometimes yt. disease would not come to a
urable Issue. We might at least after every other means have been
l to no purpose give some Med. so much diluted yt. we might
ur both intentions of quenching yt. thirst & encreasing yt. evacuation
Kidneys —

Particular diuretics. —

re 2 whole natural Orders of Vegetables, of wch. every plant has more or
of ~~a~~ diuretic Virtue. —

The Umbellate, of wch. I treated under yt. head of Stimulants. The Cicuta
e of these, & this I have sometimes known to prove very diuretic;
It was generally more so by chance than by design, & indeed all of
also ~~may~~ will act in yt. same Manner. The wild Carrot wch. has lately
much recommended in nephritic & calculous complaints will sometim
ove diuretic at other times its effects yt. way are not at all perceptible
The Stellate of wch. we have yt. Madder & Gallium or Ladies bedstraw, are
n astringent nature: and I observed before yt. all astringents at times
ved diuretic; but yt. they do not for yt. reason deserve yt. name of diu
y, as it is very seldom & only accidentally yt. they have yt. effect. The
ligusse, under wch. yt. is Horseradish, Cresses & Mustard are remar
ble for yt. diuretic effects, & are those wch. are chiefly employed for yt.
of yt. Scurvy, which they correct and at yt. same time carry off
acrimonious parts of yt. blood by Sweat & Urine — But those yt.
m to mention now are generally reckoned yt. strongest diuretics
are often prescribed in hydropical & other complaints where med.
yt. kind are indicated —

Jeremy, Genista, Senna, these are all either emetic or cathartics, & show
all med.s of y. kind will prove y. strongest & best diuretics. Jeremy
tho will by boiling it a considerable time lose its emetic virtues, but
prove a powerfull diuretic. Jalap will have y. same effect, & I would
therefore advise you if you ever to want a good & strong ma-
dicine to encrease y. secretion of urine, to make use either of one
or other of them or some other acrid purgative & emetic: make a
decoction of it & let your patient drink it. — It is not many
years since Dr. Stork first introduced y. use of Hemlock as a
diuretic & employed it very successfully in Dropsies. It had al-
ways before been looked upon as a poysonous plant, & therefore
physicians were very cautious in y. use of it. It is indeed an acrid
poysonous plant, & much of y. nature of squills. But this is perhaps
y. only reason why we should make use of it, for unless it were
so it could have little effect as a diuretic. He orders y. Syrup to
given of it. I have seen it tried once or twice for a dropsy
in both ins. cases it seemed to have some effect, but did not cure y.
person. It ~~or not~~ does not always act as a diuretic, & as I just now observed
the are few med.s y. will always act in y. manner. I think purgatives
& emetics are they are much more certain in y. operation, will also
be more effectual for y. cure of dropsies than y. remedies of y. kind.

Dulcamara. Bitter Sweet. This plant has a property in. we seldom
meet in Nature. Upon first chewing it manifests itself by a remar-
kable bitter taste, but on keeping it in y. Mouth the bitter by degrees
turns into sweet & at last acquires almost y. taste of Liquorish. It
is y. Stipites or Shoots of one year y. are used in Medicine. It has
been lately been again restored by Linnaeus who recommends it as a diet
drink. It has certainly a much better effect y. way y. Decoction of
Wood or almost any of y. other sudorifics generally employed for y. Purpose.

On ye cold Bath

The cold Bath properly comes under ye Class of Stimulants; tho it cannot be well ranked with any of ye particular Stimulants of wch we have already treated; for tho it stimulates ye Body it at ye same time strengthens ye whole System, & is not liable to ye exceptions wch we made on ye use of Stimulants; but this will appear more fully when I come to speak of its use in Medicine, & under what Circumstances it should be employed, under what rejected. ——

The Cold Bath is a remedy wch was employed in ye earliest times; perhaps ye use of it is coeval wth Man; ~~but ye first accounts we find of~~ for we find it was employed in every age often ~~out~~ as a religious ~~rite~~, ~~but generally~~ for ye preservation of Health & curing of diseases. — The earliest ~~accounts~~ ye we have of it are recorded in ye writings of Homer & ye ~~Bible~~ Scriptures. Among st many Nations ye Custom prevailed of dipping ye newborn Infants into Rivers in order to make them hardy. Virgil records this of the ancient Italians whom he calls a ~~hardy race~~ wch from ye birth; & Claudian says the same of ye ancient Germans, who dipped their Infants in ye Waters of ye Rhine. This custom prevails still amongst ye northern nations of Europe, and ye Russians will cut holes into ye Ice that they may dip ye Children, twice a week after ye born. The Finlanders, who inhabit one of ye northern most provinces of Sweden, still retain ye Custom of their Forefathers of heating their bodies well in a Stove room & then running out & rubbing in ye Snow, in order to harden them selves against ye Inclemencies of ye Climate. You will see whole families consisting perhaps of 12 people exposing themselves in ye manner in ye coldest day in Winter, & appearing like so many mad people & red as Roses ——

But these Instances relate chiefly to persons who by these means inure themselves to y. Vicissitudes of y. Weather & ~~either~~ to acquire or strengthen a strong habit of Body. We do not find y. the use of the cold Bath was properly known in Medicine before y. times of Hippocrates, who first ~~the~~ made a proper distinction between y. hot & cold Bath, & also pointed out y. difference between river & fall Water.—

The romans, who not only took y. laws from Greece, but also most of y. better & useful arts, received also amongst other Medicine. But y. cold Bath was not commonly made use of before Antonius Musa's time who cured Caesar Augustus of a lingering disease by means of y. cold bath after all y. other remedies had been tried to no purpose. It appears from y. symptoms w.h Suetonius has given us of Augustus's disease y. it was hypochondriac — Antonius Musa by performing this cure was promoted to y. equestrian dignity & had y. golden ring bestowed on him by y. Emperor as a particular mark of his favour: The Senate also erected a Statue to him & by his interest y. Physicians for y. & future ages were exempt from paying Taxes & had besides some other privileges w.h they still enjoy in most countries; It is also from this y.t most of y. universities of Europe a person on taking his degree in Medicine, has a golden ring put on his finger as a mark of honour. From that time y. use of it became general at Home & you will find it greatly commended by all of y. eminent roman Writers as Areteus, Celsus Cornelius Celsus — It would almost be endless to enumerate all y. Physicians who have wrote in favour of y. remedy. It is sufficient to observe y. almost all y. Ancients & y. most celebrated of y. modern Physicians have been very full in its praises & applied ~~it to many~~ successfully for y. cure of a great Variety of diseases — We shall therefore enquire 1. What Waters are y. best for y. purpose: 2. In what manner they affect our body & 3. ~~The use~~ In what diseases we may employ it & in w.h it should be rejected —

What we should observe concerning ye. choice of Water. Many Physicians give a preference to Sea or Salt Water; ye. reason however why they prefer it is not very obvious. I imagine ye. only one ye. can be assigned is ye. Salt contained in Sea Water fixes on ye. Skin & stimulates the pores. It also washes off ye. mucus of ye Skin more ye. common Water does. This I had confirmed to me by a Gentleman of my acquaintance who observed ye. Skin of a child, ye. was dipped daily into ye. Sea, discovered every vestige of being impregnated wd. Salt. It also appears from ye. history wd. Dr. Russel gives us in his Treatise de Tabe glandulari ye. he was often obliged to desist from bathing in ye. Sea for a time, untill the pores wd. had been set a running by ye. Salt contained in ye. V had in some measure healed up. But as one of the principal effects of ye. cold bath depends on ye. degree of cold wd. wd. ye. V is applied we should always give spring or pump water a preference as ye. in general is colder ye. Sea water V, unless we require a continued stimulus, such a one as is obtained by ye. Salt in ye. sea water fixing on ye. Skin.

The Water may be applied to ye. body by two methods: The most common & best method is by ye. persons jumping or dipping himself into ye. V; ye. other is by means of a suspensory bath, by wd. ye. Water is thrown on ye. body. It is however no great matter by wd. of these methods we apply ye. cold Bath; ye. suspensory bath hath even one advantage wd. we have not in ye. other. For by raising or lowering ye. Machine or Bucket ye. contains ye. V we can encrease or diminish ye. force of percussion; & we can also by adding a certain quantity of warm V or of Salt encrease or diminish ye. cold to what degree almost we please.

The skin or surface of ye. body has such an universal sympathy wd. ye. other parts ye. if it be affected by any means, either in agreable or disagreable manner, it communicates this to ye. rest of ye. system. The body is disagreeably af-

fected by ye sudden application of cold Water: The Vessels on ye surface are contracted & ye blood is driven to ye Viscera & interior parts of ye body. Hence ye external parts become pale for want of blood: from ye accumulation of blood in ye lungs ye person breathes w. great difficulty & fetches his breath very deep; ~~but~~ for this greater quantity of blood being driven ~~towards~~ ye heart, this & ye arteries are stimulated to a quicker action & ye circulation thus becomes quickened. By this means flashings of heat succeed ye cold & rigor ye cold fit had excited; ye pulse becomes full & quick; ye mind is cheerful & serene; & if we persist a considerable time in ye use of ye remedy ye muscles become hardened & firm; & all ye animal functions are performed w. alacrity, & ye person is less ~~dangerous~~ subject to cold & to ye diseases ye arise from ye sudden changes of Weather. ~~But if~~ the person should however take care & not remain too long in ye Water at a time; for if he does ye blood will either be accumulated in such quantities as to burst some of ye Vessels of ye Viscera, or ye spasm will be so strong ye efforts of ye heart & arteries will not be able to overcome it; & ye patient ~~dies~~ perishes in ye same manner as those who ~~perish~~ die during ye cold fit of an Intermittent. Examples of this kind are not wanting, & we should therefore guard against them. We may be sure that ye effects ~~are~~ succeed to our Wishes if ye person, as soon as he is out of ye bath, feels his body glow w. heat. It is also necessary ye ye person ~~should enter~~ be in a proper state when he enters ye bath: some physicians have been very cautious that ye person should not be warm when he enters ye bath & carried this matter to excess. I would never advise a person to go into cold water whilst a sweat is on him; but I know for my own experience ye ye bath will be more useful & comfortable if ye person is not cold when he enters it; besides if a person is already shivering at ye time of ~~entering~~ going into ye bath, ye spasm on ye surface will be much stronger

great difficulty, &c
these are what
in order to
body
that Nerves depend
fluids, & mus
or on
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bodies esp. by
of the Bringle
parts; in
or contracted
same time
the q. cold
have supposed
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only the mus
have it acte
these Lectures
the animal fa
tone or tension
or rigidity
forces to explain
this Tension &
think it will be
have some influence
this matter is
they may depend

overcome
& be w. great difficulty, & sometimes not at all —

In y. 2d place we shall enquire into y. manner of operation of y. cold bath, ~~or how~~; in order to this, I shall premise some few observations on y. nature of our body —

~~Physiologists~~ Pathologists divide the human body into 3 parts: in y. simple solids: the fluids, & moving fibre or solida viva. The cold bath must therefore act on these or on someone of them. —

It has been supposed & it is at this time y. prevailing opinion amongst physicians y. cold act in y. same manner on y. human frame as it does on inanimate bodies viz. by contracting or by condensing & thus increasing y. cohesion & firmness of y. simple fibre. But we must observe y. y. cold does not penetrate to y. internal parts; ~~in~~ w. ~~the~~ retain y. natural degree of heat ~~till equally strong~~; tho y. skin perhaps is condensed or contracted by y. cold. It is therefore not possible y. those parts should at y. same time retain y. heat & be condensed, & it is therefore equally impossible y. y. cold should act in y. manner these mechanical physicians have supposed. — The cold bath cannot act on y. fluids of our body by any other means but by causing a contraction of y. vessels on y. surface; this is to be ascribed to y. sensibility & irritability, & therefore the cold bath acts on y. moving fibre or solida viva. In the next place then we must enquire how it acts on y. Solida viva. — I have several times in y. course of these Lectures had an occasion to tell that towards y. due performance of y. animal functions, it is absolutely necessary that there should be a proper tone or tension of y. parts; that too a great a degree either of laxity or rigidity were equally hurtful. I shall therefore in this place & before I proceed to explain y. operation of y. cold bath on y. Solida viva, consider this Tension & by this solve some Phenomena y. occur in our body. I think it will be of service to you, as y. Theory, if it be found just, will have some influence in practice, and as I do not know any book where this matter is treated of, unless you will call my Theses w. I wrote on taking my degree, ~~one~~ —

In y. muscular system ~~owing~~ all y. fibres are kept in tense, by y. weight of y. parts, by y. antagonist muscles, & by y. parts w.h they surround. The fulness of y. blood which also contributes to this tension of y. Muscles; for we see y. in large hemorrhages, when they Vessels are evacuated, y. there ensues a general relaxation of y. Muscles & y. whole System; & on y. contrary in a plethoric habit we find y. these parts are kept stretched, tense & elastic. This then shows y. Muscular System has a certain degree of tension, w.h tension depends also on ye state of y. blood Vessels.

The Vascular system has also a certain degree of tension; & y. arteries are found there in y. systole as well as diastole; for after death & when y. action of y. heart has ceased a considerable time they arteries will contract considerably to propel y. blood. If we allow this tension we can explain several effects of bloodletting much easier than by y. common opinion of revulsion & derivation: For instance when there is a violent Spasm in any part of y. body, bleeding even in a distant part will remove y. Spasm often instantaneously; w.h can only be owing to y. relaxation w.h bleeding induces. But this matter appears much more clear in another case. The Antients prescribe Bleeding untill y. patient fainted in violent Inflamations of y. Intestines, Lungs, Stomach & other viscera. They often found y. this would have much greater effect than if they bled only untill y. patient was ready to faint. The reason is obvious. For by ye fainting there is an universal relaxation of y. whole System by w.h y. obstruction w.h was y. cause of y. Inflamation is diminished if not taken off. It is on the same principle y. ℥xx of blood taken at once from a large orifice will have a much more sudden & better effect in y. Pleurisy than ℥xxx taken at diff.t times & by degrees. It is therefore evident that from y. least variation of y. tension in y. blood Vessels, we must observe very considerable effects in y. System

But we cannot account
for the power of y. mind
under this addition
particularly
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But we cannot account for every kind of tension in our body from y. extending power of y. muscles or from y dilatation of y. bloodvessels. We must besides this add Contractility, wh is partly owing to y. elasticity of y. fibres & particularly to y. influence of y. nervous power. —

This power is only present in y. living body & perishes wh. life. The tension of y. body is plentifully varied according to y. diff. degrees of influence of y. nervous power. The tension then of y. body depends on y. extending & distending powers of y. bloodvessels & on y. tonic power. —

There are some parts of y. body where the extending powers of y. fibres have no influence at all, or at least have quite a diff. kind of influence from what they have in other parts. We have an instance of this in y. Stomach & alimentary canal. This is not kept in aequilibrio by any Antagonist muscles nor by y. weight of y. parts. The tension here then depend principally on y. tonic power, & therefore it is also more liable to be affected & more subject to variations than any other part of y. body. It is also connected wh. y. rest of y. System y. y. wellbeing & tension of this depends in a very great measure on y. state & tension of y. alimentary canal. Thus if the stomach has been accustomed to a certain stimulus at a particular hour, by wh. the tension was increased; unless it receives y. stimulus at y. usual hour a relaxation ensues wh. is communicated over y. whole system. E.g. If a person is used to take a glass of rum brandy or Wine at a certain hour of y. day, on y. return of y. hour he feels a faileness over y. whole body. He is affected wh. a palpitation of y. heart, y indicates y. sanguiferous system to be affected, & from y. trembling & shaking of y. hands we can also judge y. y. Muscles are relaxed. But as soon as he takes up his usual dram all these symptoms vanish & the system again recovers y. proper degree of tension. The same thing

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hence occurs for want of nourishment at ye. proper hour. A Person for in-
stance ye. is about twenty-five by co. he is somewhat fatigued, grows very
feeble & languid if he misses his dinner at ye. usual hour; but as soon
as he has swallowed his dinner his former alacrity & strength return. This
can be owing only to ye. repletion & tension of ye. Stomach; for it is
impossible ye. his body could have received any nourishment yet for
victuals co. he only swallowed a Minute before. Besides a draught
of cold Water or of Milk, or even a Glass of Wine, will put off this
uneasiness for a short time, or so long as their effects in ye. Stomach last.
In ye. same manner if ye. a little air is confined in ye. alimentary ca-
nal by co. this is distended ye. person will immediately be affected in
ye. most disagreeable manner. Languor, debility & an uneasy sensation
of ye. whole body, co. even goes so far as to make him tired of his life,
are not unusual on these occasions. But no sooner is ye. air expelled
but he finds himself perfectly restored to his former health & spirits. —
We must also observe in this place that as ye. Stomach has such a general
sympathy co. ye. rest of ye. body & communicates both its agreeable
& disagreeable sensations to ye. whole system; so on ye. contrary is it
also variously affected by ye. sensations of ye. different parts of ye. frame,
but particularly by affections of ye. superficies or ye. Skin; for as this
is ye. largest organ of sensation & has a great many nerves, it
is very readily affected & communicates this to in particular to
ye. Stomach, & Sanctorius has evidently shown how much ye. mind
& all ye. internal functions depend on ye. State of ye. superficies. The
knowledge of this serves to explain many Phenomena ye. occur
on using ye. cold bath —

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There is no part of our body but what may be variously affected by y^e
tension, & there occur many phenomena y^t. cannot be explained in
any other manner but by it. Dr. Whytt in his valuable Book on ner-
vous disorders gives us an instance of a nervous cough, w^h. was brought
on by y^e. least change of y^e. position of y^e. body, or by applying cold Water
to y^e. hands or feet. But on immersing them in warm Water it
went off in an Instant. This can hardly be explained on any other
theory but this of Tension. If blistering plaister is laid on a particular
part of y^e. body, y^e. irritation is immediately communicated to y^e. rest
of y^e. System. We know y^t. a plaister of y^e. kind renders y^e. part tense
to w^h. it is applied, & it is more than probable y^t. this tension is
spread over y^e. body.

We often see Men, tho of no very great strength, perform great feats, if their
anger is raised to a considerable degree; I know no method of accoun-
ting for this but by supposing y^t. y^e. nervous power increases y^e. ten-
sion of y^e. System; We also see y^t. a person when he endeavours to
lift a great load makes a very full inspiration & blows himself
up as much as possible, in order to give tension & strength to y^e. Muscles.
On y^e. contrary we observe y^t. by terror or fright a sudden relaxation
of y^e. body takes place, & even y^e. strongest men will on this occa-
sion lose all their strength as if there were a screw in y^e. case.
When I was treating of y^e. hot bath I observed y^t. it was a general opi-
nion amongst practitioners y^t. y^e. pediluvium caused a derivation;
& I also then explained its antiparmodic effects, w^h. I told you
depended chiefly on its taking off the tension of y^e. part to w^h.
it was applied, & thus relaxing even y^e. distant parts. As warm

Van Swieten ~~has~~ relates a very singular & curious Case y. illustrates extremely well what I have said of Laxity ~~causing~~ being y always accompanied w. Sensibility & Irritability. A young Woman was of so delicate a constitution & of so extreme lax a habit y. y. least ~~thing~~ irritation would throw her into a fit. It was impossible to give her any med. as y. very motion she must necessarily make in order to take y. remedy was enough to bring on a fit. In this case he employed y. following means: He order her to be swaddled or wrapt up in Bandages fr. head to foot, as tight as she could bear it w.out any great inconvenience; by this means he gave a proper degree of tightness & or tension to y. whole system & by y. proper use of other remedies employed at y. same time he made a perfect cure of her.

water is & universally known to take off tension & cause relaxation, it is but a natural consequence y. cold Water will operate by encreasing y. tension. We may therefore justly conclude y. a certain degree of tension is necessary to y. due performance of y. functions in an healthy body; that if this tension inclines either to rigidity or Laxity, y. functions are not performed in a regular manner & y. body is then in a diseased state. It is in cases of Laxity in particular y. y. cold bath is useful, & it is therefore necessary y. I should say something on y. diseases arising from Laxity. By Laxity y. Sensibility & Irritability of y. body is encreased. For Infants & Women, who in general are of more lax habits than Men, have y. nervous System very irritable, & are therefore subject to those kinds of diseases w. we in general call Nervous & from w. y. more strong & robust are almost universally free. We seldom know or hear of a strong Man being afflicted w. y. Hysterics or Epilepsy, unless he has this last disorder in his youth, or y. be owing to a peculiar conformation or also a concussion of y. brain. And in general med. y. take off this irritability will also cure the disease. Another proof of Sensibility accompanying Laxity is y. y. body or belly of a Muscle is much more sensible than y. tendon because it is paper. The Intestines again are more so than y. coats of y. Arteries. From what I have now said it will appear how y. cold bath acts on y. solida viva. viz. by giving them a proper tension, w. it probably effects by promoting ~~a just~~ proper & equal influx of y. nervous power. This will be better illustrated by giving you one or two Examples. In a deliquium animi or fainting

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when a general relaxation takes place ~~then~~ it appears to be y. ~~the~~ influx of y. nervous power into y. vital organs is suspended, & hence y. suspension of y. animal as well as vital motions over y. whole system; but by sprinkling some cold Water on y. face, y. nerves are stimulated, y. influx of y. nervous power is again restored & y. patient generally recovers. — I have known a person who never had exertion unless he sprinkled some cold ~~W~~ on y. face; in this case y. action seems to have been similar to y. former. I have also often experienced it in myself y. if I was much fatigued by exercise or too close application ~~to~~ writing or reading, ~~by~~ & y. Spirits began to flag if I then went into y. cold bath I came out as vigorous & fresh as on first rising out of bed in a Morning. — From y. above facts then it appears why y. cold Bath has from times immemorial been so much commended in those diseases that have got y. general Name of Nervous. You can also yourselves judge in what diseases it proves useful, & in wh. it should be rejected: But this we are now to enter upon, & in y. first place we shall consider in what Diseases y. cold Bath promises relief, if judiciously & properly applied. —

In y. Hysteria, Epilepsy & other diseases of y. kind, where there is a great mobility & Irritability of y. System, y. cold Bath will have very happy effects. For this Mobility & Irritability of y. System is often y. predisposing cause of y. disease, & this is readily excited by y. least occasional cause. We also see from y. following circumstance by y. cold Bath is as it were naturally adapted for y. cure of the hysteric disease: For hysterics are more common in warm than cold climates, & hysteric Women generally find themselves better during y. Winter than Summer Season. The hysteric & hypochondriac di-

ness are by many Authors considered as y. same Distemper both in y. Nature causes & also method of treatment. But I think there is not only a manifest difference in their Nature, but also in y. method of cure: The hypochondriasis is much more frequent in y. cold & warm climates, & instead of a Lacity prevailing, y. persons are generally of a rigid habit & it is generally accompanied w. visceral obstructions & always w. weakness in y. organs of digestion or chylopoetic viscera. In this disease y. cold bath is by no means indicated, unless when there is a complication of y. hypochondriac & hysteric diseases, in w. case y. remedy may be successfully employed.

Infants are very often affected w. epileptic fits but especially if they are of an uncommon lax habit: In ~~this circum~~ cases of y. kind by y. cold bath is attended w. singular advantages.

The proximate cause of a Palsy seems to be: An improper influx of y. nervous power into y. muscles of y. part affected. This may be owing to various causes, y. most of w. have hitherto escaped our observation. Yet Remedies y. restore y. influx of y. nervous power also cure y. disease. Van Swieten & others relate instances of its being cured by an intermitting fever. The symptoms brought on by y. cold bath are exactly y. same as those w. accompany y. paroxysm of an intermittent. From theory then we should conclude y. it might cure Palsys depending of a certain kind; but we have this also confirmed by experience. Among st other cases related by Baynard in his Appendix to Dr. John Floyers treatise on y. use of y. cold bath, he has one y. is very pertinent to our purpose. He says y. Dr. Blair communicated it to him in y. following terms: A Boy of 13 years of Age was seized w. a Paraplegia or palsy of y. lower extremities for w. many remedies had been tried to no purpose, tho he had found some relief from y. use of y. cold bath. He was then by Dr. Pitcarnes advice placed under y. fall of a Milldam 12 or 13 feet high, by w. he recovered y. former activity & vigour of his limbs. The famous

French Surgeon La Draw has also several cases of Palsy being cured by a drop Bath, w.h. y. French call la douche. This is made in y. following manner: the Water is suspended in some convenient Vessel in a certain height, from w.h. it made to distil by drops on y. affected part, as long as y. person can bear it; for the very force of percussion can be made so strong by this means y. no person can bear many drops at a time.

Madness or Mania has frequently been cured by this remedy & you will find many cases of this kind enumerated by Van Helmont, Floyer & other Authors. I formerly told you y. ~~it has~~ Physicians have not yet been able to agree about y. proximate cause of Intermittents, & tho I cannot here enter into y. Inquisition, yet I think y. proximate cause this evidently resides in y. nervous system. for they are brought on & also cured by passions of y. mind: sometimes they come on in y. form of an Apoplexy, epilepsy, convulsion, & by stories. Storch has a case of a man who was seized w.h. an Anacolic: & Senac tells us y. he saw a Woman who was always ~~seized~~ then w.h. a fit of Lassitude, by which y. paroxysm came on. It appears y. there is an inertia or Langour of y. nervous power & a spasmodic constriction of y. Vessels on y. superficies; by w.h. y. blood, is in y. same manner as by y. application of y. cold Bath propelled towards y. interior parts & stimulates y. Heart & Arteries to a more freq. contraction, by w.h. y. blood & heat are again restored to y. superficies & y. spasmodic constriction is overcome. These Symptoms you see are entirely analogous to y. effects w.h. y. cold bath produces on y. system, only w.h. y. difference that y. cold bath produces them w.h. in a minute or two, whereas a paroxysm of y. intermittent last 4 or more hours. If Boerhave & others have endeavoured to find a remedy by w.h. the ~~paroxysm~~ paroxysm of an intermittent be might be anticipated or prevented & ~~therefore~~ this is his meaning when he says: Si quis primum tempus & primam causam febris superare posset, eum paroxysmum illum fore tollit. i.e. that if any person could prevent

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the reception or take off the cause which induces the paroxysm, he would entirely
prevent the fit from coming on, as the hot fit & sweat are only consequents of the
cold fit & not properly speaking the primary disease. If we endeavor to
attempt this by any remedy there is none that will promise more success
than the cold bath: we have also some experts to confirm this. For
Dr. John Floyer & Dr. Baynard have some examples of intermittent fevers &
even of the quartan kind being cured by this remedy. And Dr. Donald Monro
in his book on Camp diseases tells us that a person being accidentally
thrown into a pond, he was by it cured of his disease — labouring under an Intermittent
Dr. Cheyne in his book on the Constitution of the Air speaks of it in this manner. I certainly
had no reason to repent for having at the time recommended the cold bath,
especially to those who were recovering from an obstinate intermittent: to
strengthen the tone of the fibres & to break down the sluggish humours. And
hence I learned what the use of this remedy in cases where almost every other me-
thod of treatment fails, & that sometimes in a very obstinate Quartan.
This may appear new & strange to my readers; but I speak from experience.
This remedy is greatly recommended by Galen, Aetius & Alexander Trallian for the cure
of hectic fever. There are also instances given by some modern practitioners of the
use of the cold bath in these disorders. Dr. Willis has a remarkable case to
this purpose. A strong healthy woman was in a high fever attended with
constant delirium, which would yield to no remedies: She ordered at length
that she should be thrown into a River & kept there for ½ hour: this was
done & she was immediately conveyed into a bed, upon which she fell into
a copious sweat & some hours after rose perfectly free from any symptoms of fever.
Dr. De Hahn has described an epidemic fever in the Breslau ~~transactions~~ phil. transactions that raged at that place, which took
off numbers of people notwithstanding every remedy that could possibly be thought
of was employed for the cure of it. At length the cold bath was tried & found
successful ~~not only~~ in many besides himself, who made use of it.

Sydenham of ye. former Dr. Mackin also commends ye. cold Bath in fevers & advises ye.
ye. patient should be immersed or dipped into ye. V, wd. method he thinks pre-
-ferable to any other. Fizot in his Treatise on bilious fevers, says
that he cured a person ~~by~~ of a fever whose Abdomen was greatly distended, by apply-
-ing clothes dipped into cold Water. — There are indeed innumerable in-
-stances where ye. cold bath has been attended wd. success in ye. ardent &
bilious fevers. Those wd. I have enumerated may suffice for ye. present.
Bathing perhaps may also be referred ye. custom wd. ye. Indians on ye. Con-
-tinent have to cure various disorders by bathing themselves. They do it
in this manner: They heat their Cabbins & so as to fall into a pro-
-fuse sweat, & then get themselves plunged suddenly into a river, when
they imagine themselves well cured. They return again to ye. Cabbin
& sweat themselves thoroughly, by wd. they are often freed from ye. disorder, but as they use ye.
method ~~for~~ indiscriminately for ye. cure of every kind of fever & in
almost every stage of ye. fever, it is no wonder ye. it is often attended
wd. fatal consequences. — This however serves to shew us ye. ~~ye. custom~~
there is a great similarity between ye. customs of savage & unenlig-
-hted nations; for it seems ye. ye. ancient Grecians, Germans & other na-
-tions employed ye. remedy at first much in ye. same manner as
ye. American Indians do now.

A chronic headach is one of ye. most tedious diseases ye. ever comes under ye.
notice of a physician. Headachs may be owing to a variety of causes; but it
is only seldom ye. we can know ye. true one. If it is lodged wd. in ye. cranium
there is indeed no ~~knowing~~ indelibating of it, & but seldom ye. we can cure it. The cold
bath has however been commended by many Authors & ye. elegant Celsus says: That no-
-thing is better in headachs than cold bathing. There are also many In-
-stances recorded by Baynard Floyer & others of ye. cure of ye. remedy in these
obstinate complaints. Dr. Bergius he relates an Instance in ye. little trea-
-tise wd. he published on ye. cold Bath, of a person who had long been mi-

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[illegible] is by [illegible]
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ly afflicted w.th y. ~~cold bath~~ Headach, for w.ch Setons, Issues, Vesicatories & in all ord
internal & external remedy y. could possibly be thought of had been apl
d; but to no manner of purpose. At length y. cold Bath was prescribed
him w.ch freed him in a short time from all this disagreeable compl
& remedy has also been successfully used in y. chronic Rheumatism. The
umatism is by no means confined to y. Joints of y. Limbs: it often
ks the head, teeth & other parts of y. body; & there is nothing more comm
rheumatic headaches, toothach &c. w.ch require to be treated in y. same
ner as a Rheumatic affection of y. Joints. In every kind of rheuma
there y. cold Bath promises to a remedy of considerable efficacy,
will often prove of service, after other remedies have been tried to no
pose. There are indeed some instances where y. rheumatism had de
ed y. patient of y. use of his Limbs, the power of w.ch was again
ored to him by y. use of this remedy.

~~chronic complaints~~ y. This remedy has been famous for y. cure of chronic
mplaints ever since y. times of Hippocrates. Dr. Jno. Floyer & Baynard give
stances of persons y. were quite lame & crippled w.th y. disease, being cu
d by the use of y. remedy; and every Author who wrote on y. cold Bath
furnished us some examples of y. same kind. Bartholinus gives us a
ticular instance of a danish Count, who whilst he was labouring under y. Gout
d both his hands & feet into snow, w.ch cured him of y. disease. This was
ny a precarious remedy, & I think y. during y. paroxysm we should
in for using any means by w.ch the Gout may be driven from y.
mities on ~~y.~~ some of y. Vitals y. are immediately necessary to
life; but then I do not see so any danger from using this remedy
y. Intervals of y. paroxysm, & by w.ch they may be prevented.

one of my former Lectures I told you what a great similarity & affinity
was between y. Gout & Gravel, & y. I imagined they were not only
ated much in y. same way; but also that they should also be treated alm

same manner. The cold bath has been freely used for calculous concretions in the kidneys, & often successfully. Mercurialis, who was himself a famous physician & who has left us some very good medical writings, says y. he was cured of his nephritic complaints for calculous concretions, by bathing freely in y. river Arno near Pisa in Italy. Dr. Bergius has also given us a very elaborate ~~clear~~ history of a case of this kind y. was cured by y. use of ~~cold~~ y. remedy: He says y. y. Lady of a swedish Nobleman had been afflicted with nephritic complaints for 20 years; by wh. she was almost reduced to y. last extremity; & by y. continual irritation occasioned by y. calculi she was greatly emaciated & blame of a very laxhabit & her nervous system remarkably irritable. She was freqly affected wh. vomitings & had a continual stupor & numbness of y. thigh to. a ~~considerable~~ exquisite pain in y. back. These you know are y. pathognomonic symptoms of y. stone. By using cold bathing & drinking cold water for seven years she was ~~for ever~~ relieved from all these symptoms & ever after enjoyed a perfect & uninterrupted state of health. During y. time of using y. remedy she voided a great number of small calculi [illegible] urine; & always at y. time found her symptoms rather aggravated [illegible] this continued for 6 weeks after she left off y. bathing; but [illegible] they grew easier & remained so untill y. following year when she had again recourse to this remedy; for she only made use of it during y. summer season. It is no easy matter to account for y. operation of a Medicine in every case, & it ~~is~~ must be very disagreeable to a physician to prescribe a remedy in a disease ~~cured~~ in wh. he is able to satisfy himself about y. propriety of giving it: this he cannot do unless he is acquainted wh. its manner of operation. And I think ~~t~~ this should be y. distinction between a Quack & a Physician; the one sometimes cures as well as the other but wh. y. difference: A Quack gives a Medicine without knowing in what manner or how it produces y. effects. for wh. he gives it, but a Physician again should never order a remedy unless he is acquainted wh.

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y. urine two
stretched & y. feel
an bitterness of pain

manner of operation & is always sure of his remedy producing y. effect for
which he gives it. It is for y. consideration thy. I am so particular in accounting
for y. operation of med. when it is in my power; & it is undoubtedly
of y. highest importance to a practitioner to be well acquainted w. it.
I shall now endeavour to account for y. operation of y. cold bath in curing these calcu-
lous complaints. I imagine y. ~~y~~ a laxity of y. kidneys is often y. predisposing
cause of calculous concretions being formed there; & if ~~they are~~ this is not y. case
immediately in y. beginning of y. disease it is very soon brought on, &
perhaps in y. following manner. When the sandy particles are first deposited
in y. kidneys they are stimulated to evacuate them by urine. This irritation
being often repeated they are at length rendered so lax that they cannot throw
them off. ~~And I told~~ I brought to you before y. perp. irritation or stimuli induce laxity
& destroy y. tone of y. part. In cases of y. kind then cold bathing will be
of singular advantage; for y. kidneys have a great sympathy w. y. rest of
y. system, but particularly w. y. skin, & therefore they are not only strengt-
hened as well as y. ~~rest~~ whole system by y. use of this remedy; but ~~in~~
particularly on acc. of y. sympathy w. y. skin. By this means y. concretions
or formation of sand & gravel is prevented, & if there should even be some
already formed, they are stimulated to throw it off. But should it even fail
to have this effect, it will still be of service by rendering y. system less
irritable & susceptible of pain from y. gravel.

An inability to retain y. urine may be owing to many causes. Among
others it is sometimes caused by a debility or paralytic affection of y.
sphincter of y. bladder. In this species then cold bathing is almost y. only
proper remedy, & has even been ~~recommended~~ used for y. disease by Paulus Aegineta.
By retaining y. urine too long it sometimes happens y. the bladder
is so overstretched & y. person is not able to evacuate his y. urine at all;
there are even instances of persons dying for this cause. Tycho Brahe y.

denied Mathematic
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Prudencio, y. re
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tality of body

celebrated danish Mathematician is an example of this. If they even do recover
y. bladder often retains such a weakness, y. ~~the urine~~ it is necessary to
draw off y. Urine by means of a Catheter. In this case ~~Dr. Stephen~~ cold bath
thing is y. best remedy wch can be employed & Dr. Stephenson has ex-
perienced its good effects in this disease.

In nocturnal pollutions wch frequently is a Symptom y. accompanies y.
hypochondriacs, y. remedy promises considerable relief, as also in
all seminal weaknesses. There are also some Instances of ye ex-
voluntary evacuation of Semen, these are however but very few y.
are well vouched. If we were to believe what Authors say on y.
head we should imagine y. it was a very freq. disease; but it is
far from being so, & I do not know above two or three cases recor-
ded by the Authors, ~~in which it~~ evidently appear y. ~~they were to have been~~
totally attended wch an evacuation of Semen; for what Authors generally
made imagined to be ~~an evacuation~~ Semen was in reality no more than
y. Mucus secreted by y. Glandula prostrata & other Glands of y. Urethra.
~~However~~ It is however no less certain y. y. cold Bath is y. proper
remedy in this disease, wch is owing to a relaxation of y. ~~Muscular~~
fibres of y. Vesicula seminales.

It is also an excellent remedy in every discharge of Mucus from y.
Urethra, whether y. first be y. consequence of a venereal affection, a
strain or violent exercise; for y. cause of it is still y. same viz. a
debility or relaxation of y. prostrate & other mucous Glands in y.
Urethra urinary passages.

The cold Bath has also been recommended for y. cure of violent chronic
cholics. Dr. Baynard has an Instance of a Merchant who was for a
long time cruelly afflicted wch a Cholic & almost worn out wch it; but by
y. use of y. remedy for a considerable time he recovered his former
health & state of body

whenever her also
being cured of
the method of con

bath is also
it life liable
that those who
exercising & warm
than other peo
in y. form
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on y. Disea
y. Cause he
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y. generation

Dr. Stephenson has also given us some cases in ye. ed: medicaeo of
persons being cured of an obstinate costiveness by means of ye. cold bath,
after every other method ye. could possibly be thought of had been tried to no
purpose.

The cold bath is also of an excellent remedy to strengthen ye. body
& render it less liable to colds & ye diseases arising from this cause.
We see that those who guard themselves most against colds by means of
warm cloathing & warm chambers are more exposed to ye. inclemencies of
the weather than other people. They continually what is generally called
a cold either in ye. form of a Cough, Toothach, Rheumatism, often inter-
mittent & pleuritic fever. Baynard relates ye. case of Dr. Cyprianus who
by reason of his much poring for to the
his body became so susceptible of colds, ye. he could not
walk out even in ye. midst of Summer without his Cloak, & yet was
still affected w. some disorder ye. owed for its origin to a Cold: by ye.
use of ye. cold Bath however he got entirely over this weakness. We have
a similar instance related to us by Dr. Bergius of a person who for
his infancy made use of a Fur Cap, w. is indeed a common enough custom
in those ~~warm~~ ~~hot~~ cold climates; but by ye. when he grew up to manhood his
head was so liable to be affected w. ye. least blast of cold air, ye. the
he had used over so many coverings to it. But he cured himself of ye.
bad habit of body by means of ye. cold bath.

The cold bath is also of great service to children, not only to prevent but
also cure most of ye. Diseases incident to ye. age. Since Dr. Harris has
wrote his book on ye. Diseases of Children, most of ye. Physicians have rested
satisfied w. ye. Cause he assigned & ye. method of cure he proposed. He has
endeavoured to shew ye. at ye. greatest part of ye. diseases peculiar to Infancy
are owing to ye. generation of an acid in ye. primae viae; & that ye. proper

Cold bathing appears to be particularly useful to children in this country to acclimate to guard them against the diseases to which they are liable during the Summer & autumn, viz. Diarrhoea, intermitting & remitting fevers. — In many ~~families~~ families in which I have recommended it, it has been attended with the most favourable consequences — In my own family I have practised it every summer on my two children with particular advantage. From y. time they were 3 months old they were dipped ~~until~~ as soon as the Summer had begun. One Summer only it has been omitted & that from an Idea of the superior advantages of a country residence they were removed into the Country; the consequence was they both came home sick. Since then I have kept them in Town & by cold bathing have entirely kept them from y. diseases which Children are so liable in this City. — Cold bathing begins to be practised with children much more than it was formerly; & I expect that in some years more the custom of dipping children during y. Summer will be almost general among us —

method of curing these diseases it to give Magnesia or some other medicine
of y. kind by wch. y. acid will be absorbed & thrown out of y. body. I cannot
however assent to this opinion, tho. I think it rather too general. For
y. diseases were always owing to y. ~~gen~~ acid generated in y. primæ viæ
~~Absorbents would delay cure it~~ y. evacuation or destruction of y. acid
must always put an end to y. disease; for take away y. cause & y. effect
will cease. This however is not found to be y. case: for tho we do evacuate
all y. acid by absorbents or purgatives, y. disease will not be cured; &
tho y. symptoms are sometimes mitigated, yet they will soon return wch.
will violence I told you in some of my former lectures y. a weak
Stomach or a debility of y. chylopoietic viscera always generated an acid.
y. y. acid was not y. cause but y. effect of y. disease. It is natural
to suppose y. y. same thing will also obtain in y. stomachs of Infants;
y. acid & y. diseases are owing to a laxity of y. solida vivæ or moving
fibres of y. System in general or alimentary canal in particular. and y.
Antiseptics restores a proper degree of firmness or tension to y. parts
will also remove y. disease. This is not only convenient wch. general
experience but is also found to be y. case in practice: & y. cold bath
or y. Bark will have a better effect towards preventing & curing these
diseases nt. all y. absorbent powders, were they given daily.
The Rickets are also a disease wch. Children are sometimes afflicted. The
cause of them seems to be a debility of y. moving fibres, by wch. the vessels
of y. periosteum & cartilages become unfit to secrete the proper matter wch.
should be formed into bone. The cold bath by strengthening y. body & giving it
a proper degree of tension, takes away y. cause & softer cures y. disease.
It is at least almost y. only remedy for wch. we can have any great de-
pendance. Dr. John Moyer tells us y. y. Rickets first made their appea-
rance in England, when it was no longer customary to dip y. Infants
into cold Water.

y. Divine mend
advantage. Then on
unnecessary
y. Engineer
the cases, I shall
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y. y. cold
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y. bee conge
tion; but of
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consumption,
disease & mistook a
for a phthisis pu

We are y. ~~Dises~~ most material Diseases in wch. y. cold Bath may be employed
to advantage. There are many others in wch. it may also be successfully used,
but it is unnecessary to enumerate them, for from y. principles I laid
down on y. manner of its operation, you may readily judge of its use
in other cases. I shall therefore next enumerate those cases, in wch. it is
at least attended wth. a dubious event, if it is not altogether hurtful.
I said above y. y. cold bath by giving tension & spring to y. parts
was indicated in all cases of Laxity. It is therefore a matter of course y.
it must be attended wth. bad consequences in all cases where the tension
& rigidity are already beyond y. natural bounds. Sharpham gives us y. case
of a person who by too long & frequent a use of y. cold bath had brought on
himself all y. bad consequences y. naturally attend too great a rigidity
of y. system; but of wch. he was cured by y. warm bath & such other
remedies as encrease or bring on a Laxity of y. moving fibres.
This remedy has been recommended for y. cure of a Pt. phthisis or consumption,
& if we were in y. case implicitly to believe Authors, it would evidently
appear y. this disease had frequently been cured by y. use of y. cold bath. But
if we reason a little on y. matter we should certainly conclude that
it is at least a doubtful if not a pernicious remedy in a consumption not only
but to persons naturally disposed to have y. disease. In a consumptive habit there
is generally a danger of y. disease being brought on by a hemoptoe or
some other hemorrhage. It would therefore certainly be advising very
ill, were we to order such remedies as had a tendency or power of driving
y. blood wth. a considerable degree of force to y. Lungs & other Viscera.
I imagine y. the practitioners who imagined they found y. remedy of
service in a consumption, did not pay a proper attention to y. symptoms
of y. disease & mistook a complication of y. hypochondriac & hysteric
diseases for a phthisis pulmonalis; & indeed if we examine many of those

generally y. are va
of y. former diseases
the case is y. firm
consumption. T
under y. Hypochond
y. consumption, &c
the were thrown
they were actually in
between y. species
y. former can predisp
being extended to. com
in otherwise applied to a
in y. turned in y.
the result is no uncom
indeed a habit of b
y. generally attend a
the disease,
mentioned are almost c
other cases are readi
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latter case, to. Vom
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tation in to. y. cold
with other kind We
Author way,
inclined to. assume the
fatally assigns

cases accurately ye are said to be consumptive we will in reality find them
to be ye former disease; & what is very apt to lead ye physician astray in
this case is ye firm persuasion of ye patient himself ye he is really in
a deep consumption. I do not remember ever to have seen a patient labor
ing under ye Hypochondriacal hysterics, but who thought himself absolutely
in ye consumption, & on ye contrary I have known but few really Hypochon
driac people who were themselves firmly persuaded in ye beginning of ye disease
that they were actually in a consumption. There is a great similarity of symp
toms between ye Species of Hypochondriac disease & Consumption. The patient
in ye former case perceives an oppression at ye breast wch is caused by ye stomach
being distended wth wind, & this also occasions a difficulty of perspiration.
He is often afflicted wth a freq: dry cough, ye resembles ye cough very much
in ye beginning of a consumption; & a slight fever
after meals is no uncommon symptom. To this is often joined a lean
& relaxed habit of body. The former symptoms are indeed so like unto
those ye generally attend a consumption ye it would be very difficult to dis
tinguish these diseases, if it were not that in ye Consumption these
symptoms are almost constant, whereas they are entirely occasional in
ye other case, & are readily brought on by any thing ye lays heavy on
ye stomach by wch ye is distended or by wind distending ye intestines
in ye latter case, wch Tea is often mistaken for a consumption, ye cold
bath is a very proper & good remedy, & all ye cases ye have come under my
observation in wch ye cold bath has been said to cure consumptions, were
evidently of this kind. We should not therefore implicitly follow or believe
everything what Authors say, unless we find ~~it a~~ that their histories of diseases
are consistent wth sound theory. There have as many errors crept into physick
from facts ~~falsely or igno~~ either ~~wilfully~~ through design or ignorance falsely related, as from theory ill

founded theory. And I shou would by no means advise ye. cold bath in consumption, whilst I had any other means to make use of.

What I have said of a Consumption applies also to ye. Hemoptoe & perhaps to all kind of Hemorrhages or evacuations of blood by internal parts. I have known two Instances myself where ye. cold bath actually brought on a spitting of blood or Hemoptoe. They were both Gentlemen yt. studied Medicine at ye. college of Edinburgh. In ye. one the Hemoptoe ended fatally, ye. other was saved w. great difficulty. Both might perhaps have rather been subject to ye. disease had they abstained from ye. cold bathing.

What I have now said applies only to general bathing, & it has hitherto not been determined what effects Cold Water applied to ye. Breast only would have in these cases. I think it might under certain circumstances be used, but then it would require great attention & circumspection; it is also sometimes better to make use of a medicine whose effects are dubious, than to apply none at all. There is however no possibility of laying down rules for ye. kind: it generally depends on ye. caprice of ye. patient & his friends, but I am convinced there is many a life lost by ye. Physicians timidity & fear of injuring his reputation, & ye. capricious or foolish advice of friends & relations.

The cold bath will also prove hurtful in every inflammation, for as it stimulates ye. heart & arteries it increases ye. circulation, & by giving tension it adds to ye. obstruction in ye. affected part. It is also necessary to observe ye. robust vigorous & thick as on of a rigid habit of body are much more subject to inflammation than those of a weak constitution & lax habit; in ye. former case then ye. cold bath would be unless if not hurtful, yet even inflamation were out of ye. question. We should in like manner be very cautious about advising ye. cold bath for plethoric patients; they run a great risk of having a Vessel burst either in ye. brain or Thorax, in either case it would probably put a period to ye. life.

I have ventured to commend
to the Experience
of mankind tells us in
Pestilential diseases are effectual
only at the coming
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ancients commended this remedy greatly for exanthemata or eruptions on the Skin. Experience however does not confirm this its use in these cases. Linnaeus tells us in ye. swedish transactions ye. great part of the inhabitants of Scania Smolandia are all subject to epilepsie fits, & he cannot account for unless it be owing to ye pernicious custom of washing ye. heads of children ye. have what we call a Scald head w. cold Water; by wh. means ye. bad humours ye. should be thrown out of ye. body are repelled & offer at ye. Nerves & Brain. I think his opinion is not improbable, for it is very certain ye. many diseases often take ye. rise from ye. untimely suppression of exanthemata or cutaneous foulnesses & eruptions.

I finishes what I had to say on ye use of ye. cold Bath. It is undoubtedly a remedy of great efficacy in many cases, but like all other powerful remedies it may also be perverted to a bad use. The most efficacious med. ye. we employ prove only remedies for ye. cure of diseases administered by a judicious & faithful physician. Poyson & Med. are synonymous terms; what is a Medicine in one person & in one disease is poyson in another. ~~Our most powerful remedies are tended to greatest danger~~ A draught of cold ☿ in a hot summer day to a person overheated w. Exercise is sudden death; it would be ridiculous if we were on ye. account to come to a resolution to drink no Water at all. It is ye. same there pr. w. Meds. It would be foolish never to give a remedy it might prove hurtful if administered unjudiciously or unseasonably: The strongest poysons afford us the most effectual remedies. — If this you will be convinced when I come to treat in my next Lecture of ~~Intoxicantia~~ Sedatives —

Sidd

Sedatives

Sedatives are such substances as diminish motions in y. system, & y. force of y. living power. Sedatives may either diminish motion in a part of, or in whole System. In this View bloodletting might also be considered as a Sedative by its taking off y. tension; but I am at present only to consider such Sedatives as act particularly on our nervous power, or y. mobility of w. be entirely destroyed by certain substances or medicines. It is not easy to account for y. manner of operation on y. nervous system, & I shall not even endeavour to explain y. ultimate effects. We are but little acquainted w. y. nature of y. nervous power, & we meet with nothing y. bears such a resemblance to it y. we might investigate it by Analogy: y. sensitive plants indeed do seem to contain somewhat of y. same nature; but we ~~they~~ do not give to account for any of y. operations or effects y. are produced by med. on y. nervous power. I shall however ~~require~~ take notice of some phenomena y. occur in y. nervous system, y. ~~as~~ w. author explains in diff. manners according to y. diff. ~~views~~ light in w. they view them, &c.

Question y. I shall take notice of is: Whether y. action of Sedatives be mediate or immediate? I think y. here action is immediate ~~on y. part to w. they are applied~~, but this opinion is contradicted by others. It is commonly supposed y. y. motion of y. several parts of y. body depend on an influx derived from y. sensorium commune. We may therefore readily imagine y. if y. blood is rarified & distends y. vessels of y. brain, this may ~~be completely~~ stop y. origin of y. nerves & impede y. influx of y. nervous power. This I say is probable & I imagine does sometimes happen. Some ingenious great men have endeavoured to explain y. action of Sedatives on y. same principles & have imagined y. Opium or any other Sedative indeed to be coagulation, viscosity or rarefaction of y. blood by w. the secretion of y. nervous power in y. brain is destroyed, & y. Sedatives therefore do not act immediately on y. nervous power but mediately or by means of y. circulation

that I imagine y. y. opinion will be found to be groundless if we consider
in 1st place: That there is but a very small dose required to produce y.
effect, & y. no medicine will act on y. fluids in so small a quantity, unless
its action be ~~of y. analogous to a ferment~~. In y. 2d place Sedatives are
found to have y. same effects after y. circulation has been destroyed. This
appears by Dr. Whytt's expts. who found y. ~~sedative~~ opium had y. same effect
of destroying y. motions of y. system in a frog whose heart had been torn
out, as if y. circulation had not been interrupted: This therefore
proves entirely y. action of Sedatives acting by being taken into y. mass
& not y. 3d place. It appears from y. quick operations of some poisons y. med.
confined to y. stomach can act on y. nervous ~~system~~ power & their effects be
extended over y. whole system, without their being absorbed & mixed w. y. blood. It
is unnecessary to mention y. expts. where the effects have been observed, when
the medicine contributed to y. orifices of y. stomach. It is however not im-
possible y. by these effects being produced on y. nervous system, y. fluids may
also undergo some change, & it is probably owing to this ~~that~~ Author have
fallen into the mistake ——

I have then demonstrated to you y. ~~y~~ Sedatives do act immediately, &
not y. intervention of y. circulation, on y. nervous power. I therefore
proceed to a 2d question y. is still in agitation viz: Whether sedatives
act on y. nerves to w. they are applied, or whether they act more directly
on y. nervorium commune. Altho it is beyond a doubt y. there is a
nervorium commune or primum mover, yet I think it is sufficiently proved
y. y. nervous power is present in every part of y. body during life, inde-
pendent of a new ~~effort~~ being excited: & y. sedatives act ~~primarily~~ first
on y. part to w. they are applied. There are expts. enough to show y. y. heart
after it is separated from y. body retains its mobility & contractile power for
some time after separation: y. it will even palpitate of itself: y. it can
have its motion renewed by stimuli & its mobility destroyed by sedatives. It
is therefore highly probable y. sedatives act on y. part to w. they are applied

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y. Nervous system com
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these propagate y. effects to y. other parts of y. nervous system, & most
ly to y. Sensorium commune. It has also been asked by some whether
ative act on y. Stomach, I think y. is not y. least doubt of it; but these effects
rise chiefly in those parts y. connect w. y. Stomach, & most readily
y. remote origin of y. nerves

Sedatives by y. action on y. Sensor: com: exert y. power in 2 ways. 1. In destroy
y. mobility of y. nervous fluid there, & so destroying its influx to y. rest of
system. 2. By destroying y. mobility in y. extreme parts and thus making
entance to y. impulse from y. Sensor: commune & consequently making
incapable to receive impression. You have an instance of this in y.
ts y. cold has on our body. It certainly first affects y. nerves of y. extremi
destroys y. mobility in these & if bad extends its effects to y. Sens: com:
Sedatives are to extend their operation over y. whole system, they must do it
ans of y. Sensor: commune. But we find that these effects are often
y unequal & uncertain. It must be our first business therefore to
estigate y. reason of this. This seems to depend: 1. ~~according to~~ On y. distance
y. heart 2. On y. stimulus to w. it is exposed & 3. on y. peculiar habit.
We shall consider ~~what~~ how these effects are varied by y. distance of y. part
use & we Sedatives in large doses they often bring on a palsy of y. lower ex
mities. It appears by y. experiments made w. Opium that this was y. first
mptom y. appeared on its use, & y. it ~~remained~~ was longer a going off than
of y. rest. We can know whether Sedatives act on y. Sensor: com: by ob
tive motions appearing in y. head & extending gradually to y. extremi
y. but if it acts on y. extremities y. first symptoms of y. con
tions appear in y. parts & extend gradually over y. system. I imagine
on this also we may account for y. effect of Sedatives on y. Secretory
expressing y. Secretions: For y. secretories are ~~situ~~ placed in y. extrem
ds every where over y. body, & therefore their motion is sooner destroyed
than y. of y. heart

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secretory System or ye Organs of Secretion appear to me to be distinct from ye
and the Blood vessels ~~the~~ ~~the~~ contiguous to each other; for they are very often
affected in a different manner. There are Nerves ye enter ye secretory organs ye w. are not
distinctions from those of ye Vessels: each particular secretory organ has its stimulus
act in a peculiar manner upon it, w. affecting ye system of Vessels: ms,
ion is sometimes destroyed in ye Secretories w. affecting ye heart & Vessels.
secretories are principally stimulated by means of ye excretories; by w. ye
ction is not only increased, but also ye excretion w. rest of ye system being
ulated by it eg. By sucking or handling ye nipples of ye ~~heart~~ ye excretion
milk will not only be increased for ye present time; but ~~to~~ this will also
tend to ye excretion. Besides there is no function increased by ye increased
ction of ye heart & arteries, sweat only excepted. ——

The action of sedatives on ye pneumon commune or any other part ~~depends~~ is also
ried by ye stimulus to w. these parts are at ye same time exposed. The
all & lungs eg. continue in motion the ye mobility over ye whole system
destroyed. This has been said to be owing to ye nerves of these parts being
e for ye affection ye extends over ye rest of ye system; & in an apoplexy
in may perhaps sometimes be ye case; but fairly ~~in al~~ we observe some
ch effect in sleep, & ~~but~~ moreover Dr. Haller has demonstrated ye ye
ves of ye vital & animal functions ~~are~~ are entirely ye same & are
t distinct ~~t or in~~ ye manner his predecessors have imagined. It is
much more probable ye ye motion of ye Heart & lungs, ~~is owing~~ which
cause in other parts of ye body, is owing to ye stimulus to w. these are
posed ye one for ye blood, ye other for ye air. And we accordingly find
that ye it is not confined to ye Heart & lungs, but that it is extended to
other parts, if these are exposed to a suffic. stimulus. Thus any part
ye alimentary canal can be brought into action by ye stimulus occasioned
ye swallowing of food, & it is by similar means ye any one part of ye
system can be kept in motion notwithstanding the operation of sedatives,
or ye ye person be in a sleep. This is further explained by ye contrary taking

ous in natural Sleep or such as is occasioned by ye use of Sedatives &c. Unless every ye ideas on ye organs of Sense or every thought &c. acts keeps ye organs voluntary motion employed, be banished & removed ye person will not into a sleep. It has been maintained by ye Soul always thinks; however is not easily determined: and if it be so we at at least not ciousness of it during a sound sleep. Dreams are always ye consequence liberali; & hence they do not so often occur during ye 1st part of ye of as in ye Morning, when a stimulus is occasioned by ye agency tation. The Association of Ideas on ye judgment is formed &c. on ye whole cerebrum being free. When this therefore is not equally in every part wildness of thought ensues. From ye we may understand cause & nature of delirium. In this ~~ye prater~~ most of ~~ye functions~~ ye agency & ye voluntary motions may be performed; but there is an obstruction ye Sensor. commonly occasions an incoherence of Ideas. We have monly imagined ye delirium is owing to a stimulus applied to ye brain, this does not account for it, & it seems to be oftner owing to a tence & obstruction, & accordingly we find ye a delirium is much less removed by taking of ye obstruction by antispasmodics than by bleeding. The effects of Sedatives are varied by habit. Every motion may become habitual then acquires a greater force. It is from habit, as well as stimulus, ye ye are less affected by Sedatives than ye rest of ye system. It is difficult to move periodical motions & it is on ye account ye opium will have much better effect if it be given at bed time or at ye usual hour sleep than at any other ~~time~~ hour: This furnishes us a rule in practice of ye which we should never lose sight viz. If we order stimulants bring on a Motion or Evacuation, or Sedatives to stop them, we should always give them at ye natural period, or when such Motions naturally ceased or stopped.

Part II

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Particular Sedatives

Particular Sedatives may be of various kinds; but hitherto we have not been acquainted wth them all; it is also uncertain whether they all agree in ye manner of operation; but of this I shall treat under each subject.

The first natural order belonging ~~by~~ to this Class of Med^s is by Linnaeus called ye Rhoeades. Most of ye Genera comprehended under y^s order appear to agree in Virtues. The only one however of them wch we employ in Medicine on acc^t of its sedative powers is ye Papaver, from ye spontaneous exudation of this fot

Opium

This is is one of ye most important substances of ye M.M. It is a medicine of such considerable power y^t it may prove deleterious & destroy ye system altogether, & therefore always requires great caution in ye exhibition. We have in all ages been great differences about ye Nature of ye medicine: ye Ancients not only disputed whether it was cold or hot; but at this day cannot agree whether it acts principally as a Stimul^t or whether it acts in any case directly as a Sedative. These doubts have probably arisen from ye effects of Opium being of a mixed nature & proving all according to ye dose, ye time of exhibition & ye state of ye patient. In order to make you understand this I shall give you ye phenomena y^t ap^r on taking a dose of opium. I must however observe y^t these effects are very diversified; but I am here only to mention what occurs on a proper dose of Opium being taken, & not take notice what happens in particular persons y^t have long accustomed themselves to ye use of ye drug, or persons y^t are otherwise affected by it than people in general are. On taking it we first perceive a frequency of pulse, after wch ye body is perceptibly warmed, & generally wth a redness & flushing of ye countenance. ~~During~~ Which the effects last there is a serenity of mind & a lively imagination, & in

many persons this is attended w.th cheerfulness & pleasure. In some persons
it is or succeeded by chagrine, irritability & irascibility. By y.e time y.e
sense become remarkable y.e senses appear imperfect, y.e imagination false
& a delirium & intoxication immediately succeed. This imperfection of
the senses proceeds to a total want of sensibility w.th ends in stupor & an
appearance of sleep. ~~the~~ During y.e sleep y.e pulse is ~~pretty generally~~ almost
constantly full & freq.t; this however varies in diff.t persons. It is also
during y.e sleep y.e a sweat takes place, whilst y.e other secretions are sensibly
diminished. After y.e y.e person awakes & if no other stimulus succeeds
he perceives himself cold & weak. This is y.e series of phenomena y.e
appear in a person on taking a good dose of Opium & from this we
plainly see y.e there is a mixture of stimulant & sedative effects. The
exact I said will vary in diff.t persons according to y.e dose & other circum-
stances. If we take y.e mixture of stimulant & sedative properties of
Opium in our view we will not be under a very great difficulty of
explaining y.e phenomena it occasions in y.e human body. In y.e 1st.
place y.e stimulant power is exerted on y.e heart ~~& arteries~~ larger pulse,
shewed by y.e frequency of pulse, heat & flushing. The stimulant power is next
exerted on y.e sensor: comune. I must rest satisfied here w.th telling you
y.e it may be demonstrated y.e a free & uninterrupted flow through y.e
sensor: comune is always attended w.th serenity of mind; & y.e y.e contrary
is chagrine & fullness happens if this is obstructed; it is also ~~from~~ evinced y.e
equable & free flow of y.e people ~~are~~ enjoy a lively cheerful & pleasing imagination.
These are y.e effects of stimulant power, except such as are only secondary.
When y.e sedative power begins to exert itself it is also attended w.th expand change.
These are owing partly to y.e increased ~~int~~ resistance to y.e sens: comune,
partly to a quickened circulation producing tone & irritation, & partly
to y.e imperfect sense & false imagination. It is not easy to assign a
reason for gaiety & fullness in diff.t persons, & why it occurs at diff.t
times in y.e same person; ~~but~~ & therefore I shall not take up your
time w.th y.e assigning conjectures why & how it takes place in y.e particular

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stance. By ye combination of its sedative & stimulant virtues it produces
delirium, in ye same manner as this is produced from similar causes.
The false imagination is also partly owing to this; for by ye resistance ye
sedative power gives to ye nervous system whilst ye stimulus still urges
on. The sleep & stupor & are more directly owing to ye its sedative virtues;
ye fullness of ye pulse & during ye sleep is occasioned by ye accumulation of
blood in ye larger vessels & ye rapidity induced on them; the frequency of ye
pulse may be accounted for from ye stimulus of ye opium still remaining & not being
obviated by ye sedative power. It is also by ye sedative power ye ye organs of sense
& voluntary motions are destroyed, by its removing ye particular stimulus.
The secretions are diminished from ye distance they are from ye fountain;
except sweat wh is occasioned by ye increased circulation.
If in ye prevalence of ye sedative power ye induces languor, coldness weakness
headach. If ye stimulus be prevalent it occasions fever, inflammation &
pain, especially if any other ~~violent~~ strong stimuli subsist in ye system at
the same time.
From what I have now said you may understand both ye good & bad
effects of Opium. It is easy to see ye from ye stimulant power of opium it
will prove an excellent cordial, tho at ye same time it will produce
inflamation if ye stimulant power be great, or if there are other stimuli
subsisting in ye system. On ye contrary it may by virtue of its sedative
power even be made to correct inordinate motions of ye system, except those of
the heart & ~~blood vessels~~ or in other words in fever. As it may by its sedative
power destroy motion entirely, we may comprehend why & how it will in
particular cases induce debility. These are ye principles on wh we
may explain in what manner Opium proves hurtful or is salutary
in diff diseases. But as it is a remedy of such great consequence
in our practice, I shall prosecute this subject a little farther

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shall first begin co. explaining its use as an anodyne; for by this we shall
at ye same time understand its other qualities. Pain may be consi-
ed as of 3 kinds arising from 3 diff. causes viz. Distension, Spasm &
tation. We have Instances of pains arising from distension, co. are at ye same
me attended co. Inflamation, in all topical inflamatory fevers eg. Pleurisy:
ins from Spasm are most freq. in ye alimentary canal eg. the Colic:
ins from Irritation or ye application of acid stimuli occur in Cancers
shall in ye first place consider ye use of opium in pains arising from
flamatory distension. As Opium, in its first operation encreases ye circula-
on & impetus of ye blood, & even at last accumulates ye blood in ye larg
r vessels, by co. the heart receives a greater stimulus, it must have ye effect
increasing inflamatory distension. And even when it is given in so large
dose as to lull ye Senses & take off ye sensation of pain; yet as it does
t remove ye inflamatory distension or its cause, & as it produces accumu-
tion in ye larger vessels, by co. it causes a severer return of ye pains after
e anodyne effects are over, it must evidently prove hurtful. In those in-
flamatory diseases whose solution depends on a particular operation, eg.
suppuration in a Pleurisy, Opium must also prove hurtful; for by checking
his it prevents ye only safe & salutary crisis of ye disease. From this
is easily & readily understood why Opium is hurtful in inflamatory pains.
But there are some inflamatory diseases, co. tho they be founded on
n inflamatory diathesis are apt to become chronic eg. ye chronic
heumatism. The acute rheumatism is always an inflamatory disease;
ye chronic rheumatism is oftener of ye nature than is imagined; &
requires freely to be cured by ye antiphlogistic method; ye use of Opium
therefore in this disease is at least doubtful. I shall endeavour to
ascertain ye use of opium in these cases. It may be employed for a
temporary relief in pains of long standing, co. are confined to a particular
part & not attended co. fever; but then it will afford only a temporary relief
and it does not in any case of ye kind contribute to ye cure; may let only

even be hurtful in pains of very long standing, y. are entirely confined to a single part, by increasing y. irritation; & this should caution us from giving it very freely in cases of this kind. It may be applied w. more safety externally to a particular part; & I imagine y. it is on y. possible y. y. Hemlock has been found serviceable when applied ~~applied~~ externally in y. chronic rheumatism. The use of Opium is also attended w. good effect when applied externally in y. toothach. This is a pain of y. rheumatic kind, y. sometimes arises from inflamatory distension & sometimes from irritation. In y. last case it is often useful by being applied to y. nerves of y. part. But I am not so clear about y. propriety of its use in y. true rheumatic toothach depending on distension. Yet if it proves in y. case I imagine it is so by destroying y. nerves of y. part. We must also to y. head of inflamatory distension refer y. Gout, & consider y. use of Opium in y. disease. The pains y. occur in y. extremities in y. disease are certainly of y. inflamatory kind & it may therefore be supposed y. it increases these: It is also certain y. it ~~at times~~ sometimes has this effect; & in this case it is rather of advantage for y. health of y. body depends on this inflamation. It has been a great dispute amongst Practitioners whether we should give opium in such quantities as to take off this pain. Sydenham & most of y. celebrated Physicians are clearly of y. opinion y. y. more violent y. pain y. shorter is its duration & y. less hurtful will it be to y. system. If y. pain be so violent as to overcome y. patience of y. ~~patient~~ person they allow y. opium may be given, but they at y. same time very justly observe y. in this case we always see y. risk y. y. disease will attack other parts w. greater violence, & ~~I have~~ they are not instances wanting y. shew this to have happened. We should then observe this rule: that opium should never be employed during y. attack of y. gout, nor even when y. disease is at its highest

also there is some very evident symptoms, y. are owing merely to y. irritation
occasioned by y. pain. After y. pains are abated it may be given; but even
then it ~~debilitates y. stomach~~ weakens y. tone of y. stomach it debilitates
power upon wh. y. healthy termination of y. Gout depends. It is however
to be considered y. it is often attended wh. good effects when it is given
y. end of y. disease & restores y. patient soon to health & prevents
many an uneasy night. There are also instances of persons having obtained
same effect by taking to a course of spirituous Liquors immediately
after y. pains had gone off. I imagine there that if y. stimulant effects
of y. opium take place here about y. sedative being very considerable &
y. a sweat is promoted at y. same time, in this case it will act chiefly
as a strengthener. There is also another species of pain y. ought likewise
be referred under y. head of inflammatory diseases. Viz. that wh. occurs
in Suppuration wh. is y. imediate consequence of inflammation; but ~~diff~~
on y. first stage of wh. we have just spoken. It may appear y. there is
contradiction here to what ~~we~~ I have just now said; but this is not y.
case, for there is certainly a difference between suppuration & inflam-
mation tho we do not know y. causes on wh. this difference depends. It ap-
pears from practice y. y. pains arising from suppuration may not only
be properly & safely mitigated & allayed, but y. y. suppuration is even
promoted by y. use of opiates. It is upon this foundation y. Opium
is made use of in y. Small pox. Were it not confirmed by daily exp-
erience & y. general practice at y. time, we might quote y. authority of
Sydenham for y. to prove the use of opium in y. case; tho it was ind-
eed employed many centuries ago by y. arabians for y. same intention.
~~but the~~ Sydenhams practice in y. disease has however of late been called in ques-
tion. It has been ~~thought~~ y. opium produced costiveness & fever, diminish-
ed y. secretions & increased y. distension & determination to y. head.

These doubts have had such an effect on a great many ye they have laid ye use
of opium entirely aside in ye disease. Sydenham takes no care ye obviate
the effects of opium in producing costiveness, this should lead us to conclude
he did not dread it, & indeed there are instances & cases in wch. ye effects
produced by ye remedy ~~have proved fatal~~ in ye small pox has been of service. But ye better
more safe & now more common practice is to obviate ye costiveness by
giving emollient glysters during ye whole state of ye suppuratory fever,
he again was so fond of opium in ye disease ye they give in ye inf-
lamatory stage & during ye eruptive fever, but this is undoubtedly an im-
proper practice, & I think ye in general we ought not to give it before
5 or 6 evening after ye attack. The secondary fever in ye small pox is
often of an inflamatory nature in wch. we endeavour to attack a dia-
rhoea; it would therefore be an absurdity to give opium during ye period.
Sydenham gave Opium ~~even~~ when there were evident signs of a de-
mentation to ye head & brain, even accompanied wth. delirium, wch. he
has improperly called a Phrenitis; & he gave it in such doses untill he
overcame these symptoms. There are cases analogous to this wch. we meet
wth. pretty in practice: where ye symptoms wch. are apt to alarm are from
the use of opium can only be conquered by giving this in a larger dose.
There is however some judgement necessary in this case. If it appears to
us that ye symptoms are ye consequence of having given ye opium
in too small a dose it will certainly be necessary ye we should give
more ye it; for in this case they ~~ay~~ will often be removed; but there
are particular constitutions wch ye body may be in a certain state ye will
not bear opium at all; in this case we should not push ye use of opium
too far. And I have pretty seen ye putting ye feet in warm for 5 minutes
would effect what repeated doses of opium could not. We come now in ye 2d.
place to ye use of opium in pains arising from pain: —

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Pains arising from spasm of whatever the denomination they may be, are most
effectually removed by ye use of Opium. But ever since Medicine has been
the Object of particular who cultivated it as a Science, there have been
disputes about remedies ye powers extraordinary Virtues. Huguet & my
Physicians of Paris have bestowed extravagant encomiums on Opium; Stahl
his followers reject its use almost entirely upon ye principle ye it acts only as
palliative & does not remove ye cause of ye disease. But in cases of
this kind it certainly has a different effect & does not only act by removing
cause of ye pain but also by taking away ye cause of it. Spasms are occa
sioned by ye unequal distribution of ye nervous power & therefore can only be cured
by stimulants or sedatives. We may judge of ye use of Opium in ye curing of
spasms from its being ye only remedy ye is employed w. success in those violent
spasmodic affections ye tetanus & opistotonos w. occur frequently in ye warmer
climates, w. you find described by Chambers & Hillary. Therefore say it
down as a general rule ye Opium is not only innocent but useful, both as a sedative & stim.
in all spasmodic affections & in all pains owing to these, unless they be ac
companied w. inflammation. I shall here enumerate ye particular cases in w.
it may be employed. There is no part of ye body so liable to be affected w.
spasms as ye alimentary canal, where Opium does not only prove useful
by acting on ye system in general, but it is more immediately applied to
ye part affected, & hence ye great use of ye medicine in Colics. The spasms in
ye alimentary canal may be owing to a variety of causes, w. sometimes in
dicate a diff. method of giving Opium, but none of them do entirely
exclude ye use of our medicine. I shall explain myself a little more fully
particularly. Spasms of ye Intestines are sometimes of ye hysteric, sometimes of
ye hypochondriac kind; frequently they are also called one or other of
them when in reality they are arthritic. In other cases they are connected
w. ye hemorrhoidal flux either as attending ye Malignant hemorrhoids
or ye efforts of nature, or arising in consequence of a suppression of ye he
morrhoids. In a similar manner they also attend ye menstrual flux, happ
ening whilst ye is coming on, whilst they are flowing or attending ye suppression
of them. They are frequently owing to eruptions on ye body being repelled,

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often to irritations on a particular part, as in y. Nephritis, when y. spasm is generally communicated to y. Intestines. Spasms often also arise from stones in y. biliary ducts, & these are often supposed to take their origin in y. intestines; but it is more probable y. they are owing to y. sympathy between y. intestines & biliary ducts. Spasms often arise from irritations of an in y. stomach; often from poisons of a saturnine & arsenical nature; whence y. Colica saturnina, & co. should also distinguish y. one y. is owing to Arsenic. Spasms are also often owing to Irritations in y. Cuticle eg. from worms, they take their origin from various acrimonies in y. prima via. In this case y. Bile is generally accused as y. cause; but these spasms very often arise from acidities or crudities occasioning a greater discharge of y. Gall: they may also be owing to other irritations lodged in y. intestines eg. pain denied fæces &c. All these are idiopathic & have been distinguished by various names & into diff. kinds: The biliary colic; y. iliac passion, y. colica pictonum or dry belly ache &c. To all these causes of spasms we may add inflammation. Opium is y. remedy to. it generally employed for y. cure of all of them if we except y. last or inflt. But these diff. kinds of Cholics do not affect every person in y. same manner; they are various & often require other substances should be combined to y. opium, for tho it is an effectual cure in some cases, yet it is only a palliative in others. If it however may be in all of them & will effect a cure of them, unless where y. bowels are hardened fæces & must be removed or acrid matter evacuated. This Conception however does not carry y. force to. it co. a great many have imagined; & we must even employ Opium in those cases where y. acrid matter or hardened fæces are to be subdued. Thus in diarrhoea & Cholera we evacuate y. acrid matter to. great propriety, but then we must not let this evacuation continue too long, & when the spasms are very violent our first thoughts should be employed how to quiet them, & rather defer y. evacuation to a more suitable time. This appears much more evident when y. fæces are hardened. It is certain y. opium produces a slow action of y. peristaltic motion & thus occasions costiveness; it may therefore appear strange y. I should here recommend Opium

for ye cure of ye ~~affections~~. But on what dos. costiveness in these diseases
exactly depend? It depends upon spasms; & unless we allay these it will be
to no purpose ye we attempt to cope them by means of purgatives.
For these will have no effect unless Opium be previously given. We have
shewed myself ye Physicians, who have ye reputation of being amongst
ye foremost in ye profession, have tormented ye patient wh. making him
swallow castor oil & other purgatives in ye Iliac; when at ye same time
ye spasms were so violent ye ye stomach could not bear a spoonful of
the most agreeable drink; whereas had they previously given a dose of
Opium to settle ye inordinate motions of ye stomach, a purgative
might have been given wh. propriety. Nay I have known Opium produce
evacuation in these cases ~~when~~ before purgatives of any kind had been given.
But we may give ye Opium & purgative at ye same time & apprehend
since has shewn, ye tho it checks ye operation of ye purgative, it does
more than compensate for this by taking off ye spasm. And indeed
most of ye later Writers on ye subject seem now to agree ye in ye Iliac & dry
belly ack we should not wait untill we have procured an evacuation; but
give ye Opium at first & ye purgative afterwards or very often animal &
vegetal at one & ye same time. We have been much deceived by supposing
ye Iliac was always attended wh. inflammation, wh. has led us to blame
ye use of opium in this case; & this we do wh. propriety if we can by undoubted
symptoms discover ye there is really an inflammation: ye hard fast
pulse & fixed pain are ye surest signs of it. But these are not infallible
& Opium has been employed when these were present, & for its being
evidently of service plainly shewed ye no inflammation had taken place. Ye
Iliac ye is also often an entire exception for ye spasms, & ye inflammation
is only a consequence of this. If you consult ye writings of Dehaen
& Hillary, you will find ye ye use of Opium in ye Colic petitonum is well
founded. We may then upon ye whole conclude ye there is no spasm
the affection of ye kind in wh. Opium is not very properly employed; unless

inflammation hinders us from giving it, or y. we must mix w. it purgatives
in order to evacuate hardened fæces. I shall next take notice of y. spasmodic pains of y. stomach, independant of those of y. intestines, &c. are
often owing to acidity, arthritic, hysteric & hypochondriac affections. Opium
may certainly also be given in these, but in y. 3 last y. disease or morbid
affection is not confined to y. stomach, but is common to y. system, & as
opium is apt to give a bad habit; as y. fit naturally often returns, &
as opium by weakening y. stomach tends to make y. recurrence more
easy, it is very doubtful whether in all ~~such~~ cases, we should check
the spasmodic affections of y. stomach by y. remedy. It would be much better
to prevent them by exercise especially by riding on horseback, unless y. pain
is so very violent as to make y. exhibition of Opium absolutely necessary.
If it is necessary however to give opiates, we should mix them w. antispasmodics or y. stimulant aromatics &c. we formerly treated of; tho even then
we still run y. danger of indearing a bad habit or custom & of weaking y. system.
In this disease many recommend evacuants, as y. fit often arises from crudities,
but it is from y. consideration y. vomiting has been prescribed by some; but
y. objection is as strong against emetics as it is against Opium; for they
do not remove y. cause, & besides we may entirely destroy y. tone of y.
stomach by them. Upon the whole then we should from y. conclusion
of this cardialgic pains there is no one single remedy upon w. we
can depend & w. we should always continue; but we must sometimes
use evacuants, sometimes warm aromatics & antispasmodics & if y.
pains are very violent we must have recourse to opiates. I shall now
say something of spasms in y. other abdominal viscera & 1. of spasms in
y. Uterus. These may be of 3 kinds. 1. At y. menstrual period; for besides
y. 3 kinds which take place in y. alimentary canal at y. time, they also
occur in y. Uterus. 2. They are more evident at y. flow of y. Lochia,
& they are then generally called grinding pains. 3. In some cases spas-
modic pains of y. Uterus accompany childbirth. In all these 3
diff. kinds of pain y. occur in y. Uterus, Opium is y. only effectual

* It seems to operate in this case in ye following manner: When a small stone falls into ye Ureters or Neck of ye bladder, it prevents by its constant irritation, a sufficient quantity of Urine to be collected for dilating ye passage by wch. ye stone might pass off. Opium in this case removes ye complaint by taking off for a time ye mind from ye pain occasioned by ye irritation, whereby there is time for an accumulation of Urine to take place, wch. after ye effects of ye Opium are over, dilates ye neck of ye bladder or Ureter & carries the stone off wth. it

medy. In those spasmodic pains ye accompany or precede ye menstrual
evacuation, Opium does not only take them off or mitigate them, but it
so far from checking ye salutary evacuation, ye it rather promotes it.
It is also an effectual cure for ye grinding pains or dolores post partum,
except there are owing to some hurt or mismanagement during ye delivery
that has caused an inflamatory distension: in this case bare must be
cautious in giving it. The pains ye accompany ye birth or labour
are often of ye spasmodic kind & are called by ye common people false
pains. It is now a fact ye is generally established ye Opium takes
off these w.out hindering ye real labour pains from taking place: We therefore
conclude ye in all spasms of ye Uterus Opium is an effectual remedy, pro-
vided nevertheless ye they are not accompanied w. Inflamation. I should
have mentioned ye ye grinding pains or dolores post partum are apt if
they continue long to induce an inflamatory diathesis; & if this is ye
case we should be very circumspect how we order Opium. 2. I shall
consider ye use of Opium in spasms of ye urinary passages: ye kidneys,
Ureters & Bladder. Pains arising from affections of ye urinary passages are
commonly supposed to be owing to stones sticking in ye tubuli urinifer,
Ureters or neck of ye bladder, & consequently from inflamatory distension; but
they also often proceed from spasms, & there is no other method to account
for ye great pains occasioned by ye small stones sticking in ye Ureters, b.
are often of such a size ye they might easily enough pass through them
but for ye irritation producing a spasm w.h hinders ye passage. And hence
we must account for ye effects w.h Opium is found to have in curing ye
nephritic cases. But we must constantly
remember ye and ye good in ye cure: ye whenever ye pulse is hard, whenever ye person
have ye appetite in our eye: ye whenever ye pulse is hard, whenever ye person
is young & vigorous & plethoric, we must use bleeding to take off ye inf
flamation & apply fomentations to ye part. 3. Spasms arising from
stones in ye biliary duct, or ductus choledochus. I think we often must
w. cases where ye spasms in ye duct are ye cause & produce obstruc-

tion & regurgitation of ye bile. The only perfect cure in these cases is by ye calculi, wch caused ye obstruction, being evacuated & dropping out into ye Intestines. Probably ye here, in ye same manner as when a stone is fixed in one of ye Ureters, ye passage of it becomes more slow from ye spasmodic affection of ye duct, & therefore Opium may be of service in these cases by obviating ye irritation, dulling ye sensibility of ye duct, & permitting ye dilatation. ——— I am in ye next place to speak of ye use of Opium in spasmodic affections of ye Thorax. The heart itself is subject to spasm, at least to palpitation & spasmodic convulsive motions; but these are not to be cured by Opiates. — The Lungs are more subject to spasmodic affections than any of ye thoracic viscera; but these are often without pain. Opium by increasing ye action of ye heart & accelerating ye circulation through ye Lungs, must render ye breathing more freq. & more difficult, & therefore it has always been looked upon as a very ticklish & nice practice to prescribe this remedy in asthmatic cases. I think we may lay it down as a general rule, yt in all cases of pure spasm Opium is beneficial, but where ye is inflammation or obstruction in ye Lungs it is hurtful. The spasmodic periodic asthma is often of a mixed kind, attended w. inflammation & terminated by expectoration; so ye in ye case ye Opium would appear to do more harm by hindering ye expection, than good by relieving ye spasm. I would advise you to read Dr John Floyer treatise on ye Asthma, where you will find ye use of Opium strongly ascertained. He in these cases empty'd ye Intestines by a Clyster & ye Stomach by a puke & yn gave ye Opium. I have seen ye same practice followed w. success, & have found ye tho ye Opium did in some measure hinder ye expectoration yet that after ye spasm was removed by it, ye expectoration became more free. ——— I am next to speak of ye use of Opium in spasmodic pains of ye head. Headach is a very common complaint & arises from a great variety of causes. They are however not all of a spasmodic nature, & therefore Opium is hurtful in such as are not, e.g. in those proceeding from inflammatory

pains, & what is more frequ.; from rheumatic affections. Thro' is a 3d kind: viz. y.
apoplectic, by wh. I mean a certain state of y. System when y. blood is apt to be
collected in great quantity in y. veins of y. head & proves y. cause of vertigo,
lethargy & other soporose affections; in this kind Opium is also hurtful.
In y. four spasmodic headache, wh. we discover by y. happening in persons
subject to other spasms & y. transient continuance & y. method of cure to
wh. they yield, Opium is useful. These may be considered as of 2 kinds: Idiopa-
thic, where y. disease is in y. head itself, & sympathic where it proceeds from com-
munications w. other parts, particularly from y. stomach. In y. idiopathic headach
if we have once discovered it, Opium is advantageously employed. In y.
sympathic, altho' emetics are indicated in it, yet Opium is also useful. It is
not so certainly determined yet whether y. Cas. hysterica be idiopathic or
sympathic. It does undoubtedly often affect y. head when no other spasmodic af-
fection is present in y. System, or even occurred for a long time afterwards.
In it it is purely spasmodic it is cured by opium. Under this head of
pain arising from spasm may also be referred y. laceration &c. of tendons
producing y. locked jaw, wh. is now found to be most effectually cured by Opium.
This perhaps may rather belong to y. head of irritation or to spasms in
y. extremities. As to y. spasms in y. extremities of these we have an
instance in y. Opistotonos, & this comprehends them all; but of this
I have spoken before, & referred you to y. Authors y. have treated of it.
And in y. 3rd place to speak of y. use of Opium in those pains y.
arise from irritation. These are of various kinds & not easily to be enumer-
ated. The most remarkable & most obvious are those wh. attend cancerous
& other ulcers. In all of these Opium is a safe palliative. Those who
have entertain prejudices against this medicine condemn it because it is
only palliative & often occasions a return of y. pain wh. aggravation, wh. it
had before palliated. But this is by no means so often y. case as has
been imagined. Thus for instance if an acrid matter be lodged in y. prima
via & we can by opium check its effects & take off y. spasm, y. acrimony
may be corrected by y. digestive powers & y. afflux of y. animal fluid, & in some
cases it will even be evacuated, & thus y. Opium will do more than merely

palliate. Dr. Young imagines it is hurtful in these cases as a palliative, by
[illegible] allowing his
[illegible] own effects ~~to withdraw his attention~~, &c. ~~he built on a groundless theory~~
[illegible] have been made w. accuracy & attention, w. perhaps was not y. case, still
his manner of reasoning on them is not sound. I have frequ. seen y.
pain eased w. no bad consequences. From y. Virtues & effects y. narcotic
Extract has in these cases, we might fm analogy be led to conclude y.
Opium would at least be a safe palliative; but I think its effects are
greater & I find y. it will even amend y. digestion in Cancers. In other
ms attended w. pain Opium may also be exhibited w. good effect.
Perhaps these are y. only indications w. come under y. head. In pains
arising fm wounds & fractures, as these are of an inflammatory nature
y. temporary relief given by Opiates will rather prove hurtful. I think it
is even dangerous to exhibit them ~~before~~ when you are about to performing Amputations or
other operations, notwithstanding y. great Wm Cullen defends this practice.
But I think y. Opium is of service in Wounds whether given by chance
or design if they are tending to suppuration & are accompanied w. pain;
for the Opium will not only relieve y. pain but also promote y.
suppuration.

The next general head of y. Diseases in w. Opium has been recom-
mended is Of Evacuations y. are preter naturally increased. But
before we enter on the consideration of this I shall speak of y. use of
Opium in fevers, as these are immediately connected & generally acc.
company Evacuations. The Ancients commonly & almost constantly emp.
ployed Opium for y. cure of intermitt. fevers, & some of y. Moderns have
followed y. example. A Physician has given us an acct. in y. French
Memoirs of his practice of employing Opium in y. cure of Intermittents.
He was accidentally led to give it in those diseases, after he had been obliged
to give it for an uncommon degree of pain w. w. an Intermittent was
accompanied, & he laid it down as a rule y. y. accession of a fit was
owing to pain he ventured to try Opium ~~against it~~. He gave it about an

[illegible] before ye accession, [illegible]
[illegible] attended w. danger if
[illegible] long before ye accession
[illegible] ye giving it and
[illegible] should rather be ye cure
[illegible] directed according to
[illegible] one or ye very strong opin
[illegible] other there are in a
[illegible] he also found Opium
[illegible] by a great mean
[illegible] fallacious contains ye
[illegible] not ye bark, w. we must
[illegible] fine Opium attende
[illegible] in order to prevent
[illegible] has also a considera
[illegible] been more freely employ
[illegible] of fevers to settle the
[illegible] he also has already em
[illegible] ye he entirely
[illegible] ye question must be
[illegible] intermittent fevers; but all
[illegible] remitting or termination
[illegible] fever is not attend
[illegible] fever is apt to vi
[illegible] pure inflammatory fev
[illegible] a Stimulant, & if ye
[illegible] endeavour to prevent a
[illegible] of an intermittent
[illegible] in this disease, Opium
[illegible] smaller taken not ye least

hour before ye accession, wd. it commonly prevented & procured a mild sweat. He found ye. it was attended wd. danger if given during ye time of ~~accession~~ fit; & if he gave it to lay before ye accession ye effects of it were gone, before ye fit came on. He found ye giving it an hour before answered best, & he ~~allows only~~ says ye it should neither be ~~ye~~ over or under ye time. He thinks ye Intermittents should be distinguished according to ye ~~degree of accession~~ manner of coming on: Some come on wd very strong spasmodic motions accompanied wd rigor, tremblings &c. in others these are in a much milder degree. It was in ye former case ye he che found Opium chiefly of service; & ye medicine has been employed ~~ye~~ by a great many for ye same purpose. Boerhaves Antipyretic powders allowed contains 2 grains of Opium; & indeed I imagine ye if we had not ye bark, wd we make use of in every case, right or wrong, we should often find Opium attended wd good effects. We sometimes join it wd ye bark in order to prevent ye from purging; but I imagine it at ye same time has also a considerable effect as an antispasmodic. — Opium has been more freely employed in continued fevers. Fraller has taken a great deal of pains to settle this point, but he appears to argue like a man who has already embraced a notion & ye he was prejudiced against ye remedy; & ye he entirely overlooked or was ignorant of ye considerations by wd ye question must be determined. Opium is certainly hurtful in inflamatory fevers; but all fevers are not of an inflamatory nature either in ye beginning or termination; & every person will now readily allow ye ye nervous fever is not attended wd inflamation; for in ye bey. Virulta or vital fever is apt to sink, & it also ~~depends~~ ye remittent kind, wd no pure inflamatory fevers are. Opium may be used in ye nervous fever as a Stimulant, & if ye remissions are evident we may employ it as a Sedative to prevent a new accession, in ye same manner as we employ ye bark for ye cure of an intermittent. And whenever there is an indication for ye bark in this disease, Opium may be given wd equal propriety. But Fraller takes not ye least notice of this. — I think ye Wine is an

agrees in its effects to Opium, for it is both a Stimulant & sedative. But it affords a safer Stimulant medicine than Opium, for it can not only be given in smaller doses, but ye. acidity ye. accompanies Wine it is rendered less inflamatory & therefore it may be more effectually employed in dubious cases. — I have seen fevers attended wd. very strong spasmodic affections, in wch. Camphire & musk are ye. remedies we generally employ, but where Opium is much more effectual & will even remove ye. delirium: Upon ye. whole we may employ Opium in all those fevers in wch. Wine is given wd. safety: these I have treated when I treated of Wine; it is therefore unnecessary to repeat them here. I now go on to consider ye. use of Opium in encreased Evacuations

The first of these ye. I am to speak of is ye. Catarrh, an affection of ye. head & breast. This disease may in general be considered as an encreased Evacuation of Mucus, generally in ye. thin acrid state in wch. it is secreted. ~~It has~~ Catarrh however more universally has been considered as a disease in ye. membrane of ye. bronchia, accompanied wd. inflamation, or wd. acc. Opium has been thought rather hurtful. We may ~~that endeavour to~~ reconcile these seemingly jarring opinions by ye. following general rules. 1. A Catarrh may be a recent affection brought on by cold, & is then more or less of an inflamatory & feverish nature; & therefore Opium in this case may be hurtful & dangerous. There are however many cases of rec. colds attended wd. cough & catarrh, in wch. I have seen Opium employed wd. advantage, & very often ~~to~~ by producing a sweat or diaphoresis cured ye. disease. It has been a dispute amongst practitioners whether a recent cold should be cured by sweating ye. patient; it is serviceable in some cases, in others it aggravates ye. disease. In this we may take ye. for a general rule: that if there is any degree of fever ~~we~~ it will be much better to reject the use of Opiates. 2. If ye. Catarrh has continued a considerable time, it has become habitual, & of an inflamatory, where ye. ~~stimulus~~ delirium or evacuation is thin & acrid; Opium is ye. only effectual remedy, for it takes off ye. sensibility of ye. part, stops ye. evacuation & allows ye. secreted mucus to remain in ye. follicles, untill it has obtained its proper consistence & tenacity. 3. There are Catarrhs in wch. there is an encreased secretion & a great deal of gross mucus, seemingly arising from a greater quantity of ye. fluids, wch. furnish ye. mucous matter being carried to ye. Lungs. This disease must be considered as an Infarction or obstruction & therefore Opium is not ye. proper remedy.

in order
to ye increased Evacuation of Mucus, is ye co. ye Liquid is thrown up
Vomiting. I might have referred this under ye head of Spasm, but as it is
ended to evacuation, it is a matter of indifference whether we consider it
ye head of increased evacuations or under ye Spasmodic affections. It
difficult matter to ascertain properly ye use of Opium in Vomitings, as there
be owing to such a variety of causes. If a Vomiting is occasioned by
acid matters taken into ye Stomach, then it can not be or ought not to be stopped
and ye is again expelled. It would e.g. be very absurd to check a Vomiting
ye is occasioned by a poison being swallowed, by giving Opium. But
Vomiting proceeds from an acid matter generated in ye stomach itself, w. acts
as a ferment or leaven, & changes or converts into its own nature ye other juices w.
poured into ye Bran; when this kind of vomiting has continued for a considerable
by co. ye Stomach & whole System become weak & debilitated, it may be
aided co. Opium. Nay by this means ye acid matter will perhaps be cast
to ye Intestines, be corrected there by ye greater afflux of fluids & may be
evacuated by means of a Glyster. Thus in ye Cholera after ye Stomach has
well cleared & evacuated, & ye vomiting still continues fm ye flow of bile in
ye stomach occasioned by ye inverted motion of ye Intestines, Opium may be
ful by taking off this motion & restoring ye proper peristaltic one. But
ye vomiting proceeds from Inflammation or Scirrhus Opium is not only
less but in many cases hurtful. Opium again is universally useful where
vomiting is a sympathetic affection arising from spasms of ye stomach
communicated to ye Stomach. There is one species of Vomiting in w.
it is still very doubtful whether Opium should be given or not: viz. In ye
iting co. occurs in ye cold fits of intermittent fevers. Some check this
Opium, others mix it w. ye saline Draught. If we could confine ye effects
ye saline draught to ye Stomach perhaps Opium might be a useful addition.
determining to ye Surface of ye body; but in very many cases this vomiting
a salutary effort of nature to throw off ye offending or peccant matter
to determine ye fluids to ye Skin & surface & therefore it ought not to be checked

giving Opium. I am
quantities of y. Intestin
ness & dysentery, but
ined in which practica
fore ought to condemn it
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companied w. fever & pe
kind of dysentery of
ness consider y. Dysente
very seldom y. case, &
proper of giving it th
totally forbid the use, so
stid in matter & hardness
y. medicine. Opium may
hardened fæces should be
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matter. Dose y. greatest o
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sor, that Opium should
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giving powers in y. Defec
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this means of giving fa
several days

giving Opium. I am next to speak of ye use of Opium in excessive
evacuations of ye Intestines. It is very common to give Opium in Diar-
rhea & Dysentery, but I hardly know one Author who has well ascer-
tained in what particular circumstances it ought to be given; & even
those who condemn its use in these cases, do not tell us in wh. par-
ticular circumstances it is hurtful. When ye Dysentery is just come on
accompanied wt. fever & perhaps an inflammatory diathesis: in short in all
kinds of dysenteries ye. require bleeding; Opium is hurtful. Some Phys-
icians consider ye Dysentery as an inflammatory disease; but this I think
very seldom ye case, & Opium may therefore generally be given. But
the propriety of giving it has even been disputed in this case, & some
absolutely forbid its use, saying ye it gives occasion for a retention of
acrid matter & hardned faeces. We ought certainly not to trust ye cold entire
ye medicine. Opium may be often given notwithstanding ye acrid matter
hardened faeces should be evacuated; for they frequently, in ye same manner as in
fever & dry belly ach, owe their rise to spasms wh. can only be removed by
opiates. Even ye greatest opponents to ye use of Opium in these cases,
allow ye it may be advantageously combined wt. purgatives, it was then
ridiculous to condemn ye use of it, & the matter should rather have been
settled so, that Opium should be universally employed in a Dysentery, if it does
not interfere wt. ye evacuation. Opiates does not act in this case as an
astringent, & therefore cannot be considered as one: it ~~only~~ acts by diminishing
moving powers in ye Vessels for a time, & leaves ye System as lax & not
so tone than before it was taken. The best way of giving Opiates
these cases I think is to order it a proper dose at bed time, if
a purgative has been given in ye Morning. I have seen Dysenteries cured
this means of giving purgatives every morning & Opiates at Night
for several days.

Evacuations of Blood

[illegible] to consider y. use
[illegible] be natural or
[illegible] Ergo may be
[illegible] these 3 heads
[illegible] forever does not
[illegible] this is generally
[illegible] of y. Cat. Cause,
[illegible] to effect
[illegible] be considered
[illegible] time unless
[illegible] May, would
[illegible] it is apt to
[illegible] Doctrine of Opium
[illegible] to appear
[illegible] right of
[illegible] from misconduct
[illegible] Wounds
[illegible] should be
[illegible] case in
[illegible] contrived to abort
[illegible] bleed. There is
[illegible] to give opium
[illegible] y. use of this
[illegible] pretty to prove
[illegible] said y. where
[illegible] is not always true
[illegible] from having a good
[illegible] y. will
[illegible] of an inflammatory
[illegible] Pt. of y. Hemorrhage
[illegible] to inflammation, bleed
[illegible] known to all of good
[illegible] mercurified, this is
[illegible] by administering

we next to consider y. use of Opium in Hemorhages or Evacuations of Blood,
either these be natural or morbid. The only natural Evacuation or Hemorhage is
Menstrual. This may be encreased by various causes, all of them may however be
ranged under these 3 heads: 1. It may be attended w. an inflamatory Diat-
hesis, this however does not happen often. The 2d. depends upon Spasm & 3d.
debility, this is generally combined w. Spasm. When y. Hemorhage is owing
to either of y. two last causes, Opium is a safe & useful remedy, but it cannot
be depended upon to effect a cure; for its proper only a temporary astringency
and therefore be considered any thing but a palliative, w. we may employ
in order to gain time untill we can ~~give~~ exhibit astringents y. give a stone
y. parts. Nay I would even advise you not to be too fond w. its use in
these cases, as it is apt to bring on an inflamatory diathesis. In a prog-
nosis of y. Lochia Opium ~~affords~~ is a good remedy, for this hemorhage
is often attended w. spasmodic affections & debility; but in this case we
should never lose sight of what I told you in my last Lecture. viz: That
it from misconduct during y. Labour, or from y. pains y. often come
after Birth, & ~~Women~~ is often an inflamatory diathesis brought on,
in w. case we should be sparing w. y. exhibition of this remedy.
There is a third case w. is analogous to the two former. viz. When pregnant
women are threatned w. abortion, and a flow of blood from y. Uterus has ac-
tually taken place. There is no case in Medicine in w. it requires greater
judgement to give Opium than in this. The remedies y. are generally
employed for y. cure of this are either Bleeding or Opium, or both together. I have
known Abortion freqtly prevented, but also y. often brought on, by Bleeding.
It has been said y. when y. Woman is plethoric, Bleeding is y. proper remedy,
but this is not always true, for I know instances of this kind in w. Bleeding
was far from having a good effect; it is therefore next to an impossibility
to lay down rules y. will apply in every case. In general you may observe y.
when y. disease arises from
a cause of an inflamatory nature, bleeding will be y. proper remedy, & Opium
useless. But if y. hemorrhage is owing to hysteric affections & not accom-
panied w. Inflamation, bleeding is hurtful & Opium will be of service.
It is known to all of you y. Abortions are often habitual, & if a Woman
has once miscarried, she is almost for ever after likely to do so unless you it
be prevented by administring of proper remedies ~~to prevent it~~. Opium is

useful in this case
for they would dis
of blood y. take
the hæmo
disease. Still & his
excavation, & ye
chiefly aimed
that it
becomes a habit &
one of those ha
than if y. p
proceed from y. natu
it consists in a distur
y. nature, so often depe
hence so greatly y. cause
it will always
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when y. disease is alle
morbid hæmorrh

Opium

Opium will pro
to y. hæmorrhagic diath
accumulate to y. fluids in
we see
rapidly see y. ex
common
see them retai
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employed opium &
practice has
opinion
y. it has been
opinion
we always don
attended
or followed
so. it
unknown
so. it is also often
useful.
But this are
cases where there was
tubercle being formed
from an accidental rupture

naturally useful in these cases, & I know instances where by ye use of it women were retained chil-
dren of wh they would otherwise have miscarried. These are all ye natural evac-
uations of blood ye take place in ye human body; & these are all peculiar
to ye fair sex. — The hemorrhage ye approaches nearest to these is ye
Hemorrhoid. Stahl & his followers imagined ye ye hemorrhoids were always
a natural evacuation, & necessary to ye health of ye person: they therefore in
practice chiefly aimed at bringing it on: ~~this~~ but I am by no means
willing to grant that it is natural: but I allow ye it frequently for various ac-
cidents becomes a habit & law to ye system, & of course necessary to health.
But it is one of those healthful evacuations ye are often attended wd some
consequences than if ye person laboured under a ~~very~~ dangerous disease.
We may judge from ye nature of ye disease ye Opium will be of service in it:
for it consists in a distention ~~of~~ & collection of blood in ye cellular membrane
of ye rectum, wd often depends on too great a laxity of ye vessels; but as co-
stiveness is frequently ye cause of this & as opium naturally increases ye costive-
ness; it is not always prudent to prescribe it for ye complaints of ye
kind. We should only order opium when ye symptoms are very urgent,
as when ye disease is attended wd a passion in ye alimentary canal, a
~~ye other morbid hemorrhages ye~~ there is no doubt but ye sedative powers of
~~opium~~ opium will prevent an excess of other morbid hemorrhages; but
when ye hemorrhagic diathesis is very near akin to ye inflammatory & whatever
accumulates ye fluids in ye larger vessels must be hurtful in hemorrhages;
& we accordingly see ye when they are repressed by opium, it is not un-
common to see them return wd greater violence than at first. The an-
cients employed opium & hyosciamus or henbane for spitting of blood,
~~& some to~~ practice has of late been revived by some physicians; & tho
it appears ye it has been attended wd a good success, yet this is in
my opinion always doubtful. Most of ye spittings of blood or hemptoes
are attended or followed wd an inflammatory diathesis & frequently end in a phthisis
pulmonalis wd is also often of ye same nature; & in these cases opium
is hurtful. But there are instances of a spitting of blood subsisting for
40 years where there was not ye least tendency to ~~tubercles~~ a phthisis or
to tubercles being formed in ye lungs, & where ye disease has arisen merely
from an accidental rupture of ye vessels & was afterwards kept up by laxity

habit. It is only in case
of advantage. I may give
of Opium. The use of Opium is
Dram for habit because of
from y. Pleasures being an
Winter of Physick. It
some particular at least
suppository disease. It
ated by tormenting Gripes
one falling over only first
using one more or less of
Dose of Opium in y.
of one Injection: viz. y.
much uneasy, & imag
may, tho' I do not know
disease from falling on
the Symptoms are coming
Ind. sometimes occurs in
to bitters more safely
coming y. Bicarb on
in vacations of Dr Graham
effectually removed by
Laudanum y. Opium was
Poppy down wild in
Opium. This nach
Juice of Poppy, but the
Oriental Poppy. The bes
Poppy heads. Have been
With regard to y. pharmac
the of your time. I
of to extract & correct

debid. It is only in cases of this kind y. Opium may be employed w.
advantage & safety. These are the cases in w. Opium is hurtful
rather w. advantage. I may perhaps have omitted several. I had indeed omitted one
the use of Opium in y. Measles. Opium has also been employed in this
case probably because it has been found of service in y. Smallpox, and
y. Measles being an eruptive disease & pretty joined to y. Smallpox
Writers of Physick. But it ought not to be given in y. Measles, on
some principles at least, we give it in y. Smallpox; for y. Measles are not
inflamatory disease & I told you y. Opium was useful, ~~in Smallpox~~
ed by promoting suppuration in y. Small pox. It is seldom y. y. Measles
endangerous in y. first attack, but they often prove so afterwards by
ing on more or less of an inflamatory peripneumonic state & therefore
use of Opium in y. case requires caution. It seems however to be indicated
some symptom: viz. y. Cough w. occurs w. a thin acrid destillation, w.
much mucus; & I imagine y. in y. beginning of this cough it may be
y. tho I do not know whether it would have y. effect of preventing
disease from falling on y. Lungs. After y. eruption is over & y. Peripneu
symptoms are coming on, it is dangerous to give y. Opium. The diar
tho. sometimes occurs in y. Measles also indicates Opium; but this
can
ten better & more safely removed by bleeding, & nothing ~~can~~ be more
ning y. y. Measles are attended w. Inflamation y. y. observation
sagacious Sydenham made: that y. diarrhoea in y. disease was
effectually removed by bleeding.

Now y. Opium was furnished by a Papaver or kind of Poppy.
Poppy grows wild in Egypt & other ~~pl~~ countries in y. East, from whence
Opium. This narcotic quality is found to be common to all y.
species of Poppy, but there is none y. possess it in so high a Degree
oriental poppy. The best Opium comes from Egypt, w. under afte
poppy heads have been wounded by an instrument adapted for y. purpose
With regard to y. pharmaceutical treatment of this Medicine, it is needless
the of your time w. enumerating y. various means y. Physicians have
ed of to extract & correct its Virtues. They may equally will extracted by

be too grea found most effectual for this purpose is
ive internal can swallow Vomits Acids, also giving acid
stimulating by ny vesicatories externally. Haller has an instance of
young Woman who unwarily had swallowed 3ss of Opium & fell into a Lep
lasted 48 hours out of wh. she was at last awakened by exciting a Vomiting
mechanical means of stimulating & tickling y. ~~Fauces~~ Uvula & Fauces

Cicuta Hemlock

We are several plants
which go under y. Name of Cicuta Linnaeus in order to distinguish
him has called y. plant or y. Cicuta of Storch Conium maculatum, &
defines y. term of Cicuta to y. Water hemlock, wh. is quite a diff. plant
this Cicuta is also thought to be y. same wh. y. ancients employed
for depriving y. State prisoners of life & of wh. Socrates perished; but this is
a mistake, y. plant y. was employed for y. purpose is y. Cicuta or
Water Hemlock & not y. Conium or y. plant wh. Storch has of late introduced
into Medicine.

This Conium or Cicuta of Storch is at present so famous y. I need not give you a per
sonal description of it here, but refer you to Storch's treatise on y. plant. He has at
tempted to Prove his treatise Drawn up some Corollaries of what he has before said, or he
proves y. use of it by induction. This plant has always been esteemed a good
remedy for resolving of scirrhous tumours if applied externally. Storch has informed
us y. it may be safely employed internally for y. same purpose. How does it act in
this case? I told you before by y. I imagined few of our remedies were taken into y. blood
in such quantities as to ~~have~~ produce any considerable effects; how then is y. Cicuta
to produce this effect? I think in y. same manner & on y. same foundation
those remedies of wh. we have already treated viz. By acting on y. nervous power &
communicating its action (providing) to y. most distant fibres of y. body. I leave you
to judge yourselves whether it produces y. effects wh. are commonly ascribed to it by
exciting y. action of y. Vessels or by dissolving y. concreted Juices.

Storch in y. Corollaries annexed to his pamphlet asserts y. y. Cicuta has no
visible effects. This I would by his leave refuse to take for granted. For it
is repugnant to what I & many others have observed. It generally produces
Vertigo & I know one case in particular where it produced Vertigo & somewhat

convulsion
his disease
producing
effects for I have known
act as sweet & thin
lb. of y. effects in th
ing evacuations.
in a very vague term &
ato. I mention it here
of y. same w. y. of phosph
whole of y. phosphate
ti. The same again
not recommended the fo
ed it for y. disease &
cer is a disease for w
an effectual cure. Many
have been encouraged by ex
tinued as soon as it
have seen & am from
has performed cures in
ch has said on y. subj
education, teacher of Med
ian to a crooked head
were not & this when
the College of Physicians
ment to build y. infirm
certainly long since hav
mislead us in judging
ever to a. it is not unlike
& Scurvy may arise fro
may have mistaken y. reme

all convulsions, took it at 40 gr. for a dose, yet it did not
in his disease applied externally it had ye same effects on him
in producing symptoms. — Besides this ye Cicuta has other sensible
effects for I have known it move ye intestines & am convinced it does some
times act by Sweat & Urine; but it has not yet been observed yt it was at
tended wth diff.t effects in these cases from what it is when it is not attended
any evacuations. — Storck has recommended ye Cicuta in ye Struma:
this is a very vague term & has been applied to every swelling of ye complexate
glands. I mention it here chiefly for us to observe yt what he calls Struma
not ye same wth ye Scrophula, for this is not a topical disease, but is different
in ye whole of ye lymphatic system & occurs more frequently in young than in old
people. The Struma again is a disease wch occurs oftener in old people; Storck
has not recommended the Cicuta for ye cure of ye Scrophula, but we have frequently
employed it for ye disease & generally wth well success &c

Cancer is a Disease for wch Physicians in all Ages have been very anxious to
find an effectual cure. Many remedies have been recommended for this purpose,
none have ever answered ye expectations ye world formed of them & hence ye Cicuta
was distrusted as soon as it was heard of & condemned by many who never tried
it. I have seen & am from undoubted authority perfectly convinced yt ye
remedy has performed cures in this disease; & I do not doubt but every Word
Storck has said on ye subject is true. I cannot conceive yt a Man of a
liberal education, teacher of Medicine in one of ye greatest Universities of Europe,
a Physician to a crowned head should dare to publish things for truth wch in
reality were not, & this when hundreds of persons, all ye Students of Medicine &
the whole College of Physicians wth Van Swieten at ye head were & must have
been present whilst ye experiments were making, & if they which he said was false
would certainly long since have undeceived ye publick. Many circumstances
may mislead us in judging of ye virtues of ye remedy. We may have applied it
to diseases to wch it is not suited: as ye Instance I gave you of Scrophula:
Cancer & Scirrhi may arise from causes for wch this remedy is too weak:
we may have mistaken ye remedy or have employed an improper medicine.

we may have taken y fla
tract properly prepared
ion for whole cause y it
time: We may have app
measure destroyed y its g
hundred accidents w. wer
se in preventing y rise
y first measure was at Sp
d a good preparation
difference is was prior to
stem: We should therefore
time, & then take to a
ce as Dr Crosse has
give you this before mor
my accounts & was ab
the days: that when he was
relief of y order off. Sha
for a very considerable tim
very weak & almost gone.
part of y Mich. the from
Doctor Pepper co. gave y Dr
Dr Toth his hands his ca
ed any of y ficate he com
applied y Dr Myrth & the
disease but during y
then encreased. He then
had not near y Victuals
had an contract made of
reins Stock at y same
on a Month, de dicto not
January he got some mo

may have taken ye plant at ye improper time of ye year, or not have an
tract properly prepared. Often it has not been continued long enough, for it apr
in most works cases ye it was sometimes necessary to continue it a very long
me: We may have applied it too gradually & by this means in a great
asure destroyed ye its effects on ye body. There might in a Word have been
ndred accidents wch were never attended to & yet have had a great
e in preventing ye remedy from taking place. There are many Instances
ye medicine was at first attended wth good effects in others ye it produ
d a good suppouration & laudable pus, but ye it did not go any farther,
perhaps was owing to ye remedy having already become habitual to ye
tem: We should therefore sometimes interrupt ye exhibition of it for
time, & then take to it again — I shall here give you ye head of a
e as Dr. Rouppe has described it in his Book ye Morbis Venigantium.
give you this before many others because ye Author seems to have been
y accurate & was not in ye least prejudiced in favour of ye remedy —
e says: That when he was at ye Island of Malta he was desired to see a
Knight of ye order of St. John of Jerusalem who was very ill of a Cancer & had been
for a very considerable time. When he first saw ye patient he found him
very weak & almost gone. The Cancer had spread over ye whole Breast & upper
part of ye Neck: from ye Wound there oozed continually a very thin acrid &
fetid Ichor wch gave ye Limb ye peculiar colour wch Cancerous runnings do.
He took him under his care in ye Month of Decbr. 1762 & as he then had
no any of ye Cicuta he employed ye Bark wth Wine & Opiates internally, & externally
he applied ye Ol Myrrh & other Detergents in order to put a stop to ye progress
of ye disease. But during ye 6 days he continued it, ~~he did not~~ the evil
ther encreased. He then got a little of ye Cicuta but this was quite young
had not near ye Virtues ye ye plant in an advanced State has: However
he had an extract made of it of wch he gave ye patient Morning & Evening 2
grains. He at ye same time gave ye Bark; but tho this was continued
for a Month, he did not perceive ye least benefit from it. About ye middle
of January he got some more of ye Cicuta: this was older & much stronger.

y. d. report of y. he bette
fewe time his symptom
y. patient complained o
Bowel bothed extremely
was discharged good & lea
gen to deal, y. patient
thought that he was not
ance and hopes of his
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gain from day to day,
d in about 8 Weeks after
ence evidently y. it was a
tion, & y. y. want of y. b
have been various organic
internally. Dr. Somer Sham
against it strongly contend
y. at means be given inter
efficacious remedies we
ow, & that was later a
y. hair of his fever from
effect of the opium
able y. quantity of flem
indiscriminate ris from
t it is no poison & if it
t. It is very considera
h y. a remedy can hav
done of it will do harm
ows y. proper dose
d any danger of this
death upon his time in
w. 12 y.

y. extract of y. he took 6 grains 3 times a day, & continued y. Bark. From
the time his symptoms became easier And about y. beginning of February
patient complained no more of pain, slept well w.out taking Opium, y.
and looked extremely well, y. Lips of it became soft & from y. whole y.
discharged good & laudable pus. About y. middle of February y. Ulcer
began to heal, y. patient could walk about his chamber & every person now
thought that he was out of all danger, tho 2 Months before there were
no any hopes of his living a fortnight But at this time y. Extract
failed & it was impossible to procure any more: the Ulcer became worse
again from day to day, tho y. he used y. bark in very large quantity,
in about 3 Weeks after y. Gentleman died. — I think y. this case
was evidently y. it was owing to y. Hemlock y. y. disease took a favourable
turn, & y. y. want of y. remedy at length cost y. patient his Life. — There
have been various arguments used to shew y. impropriety of giving y. remedy
internally. Dr. Palmer of London went so far as to publish in y. Newspapers
against it, strongly contending y. it was a narcotic poysonous plant & should
not on no means be given internally. ~~That~~ The good Doctor did not consider y. all
efficacious remedies we make use of are poysons if taken in too great
doses, & that even Tartar emetic, w.h he employs so much in fevers, & w.h is
basis of his fever powders, is a much more violent poyson than Hemlock
& that Opium will sooner deprive a Man of life than near
double y. quantity of Hemlock. There is no argum.t that can be made use of
to intimidate us from giving a remedy more ridiculous & more silly than
that it is a poyson & if it is given in too large a dose it will destroy y. pty
but. If this very consideration should induce us to make use of it, I
think y. a remedy can hardly ever be said to be efficacious unless too great
a dose of it will do harm. There would be no use for Physicians if every person
knew y. proper doses of remedies to cure diseases, & if med.s could be given
without any danger of their proving hurtful. — It is indeed very hard if a
Gentln spends his time in finding out remedies to cure diseases, & all

y friends he is to receive
they certainly deserve a

Excita ag

It was the
not y. former
tion of Cycle. This is of a
it will not kill Plea
ment roots, by so they
more mortal. It is remark
it is said y. it is attended
than y. former, & perhaps
fail. Next to these
has called Lunita.
The first of these is y.
generally looked upon as a
hinder it from being
ine of y. bowels made into
Germany infused Sena bowels
Author tells y. it has
this plant heart to vomit
from anxiety, consider y.
foremost search machine
Gardeners, has come in
only made use of for the
it has failed, we must
But it is not adapted
own office fail, yet it sho
Matter. Dr Fullen in his
A Woman born of
affected w. y. terrible
Search near y. Angle of
W. grain bulk lyd keep

thanks he is to receive for them consist in doubting his Veracity or judgment
they certainly deserve a very diff. acknowledgment

Cicuta aquatica or Water Hemlock.

was this & not y. former w. y. Ancients gave to y. State prisoners to deprive
on of life. This is of a much more virulent nature than y. former, & y. roots
it will ~~not~~ kill Men, w. often has happened, for they resemble some other
lent roots, by w. they sometimes happen to be taken for them, & generally
re mortal. It is sometimes applied externally in y. Elephantiasis, &
is said y. it is attended w. good effects. It is a much stronger medicine
y. former, & perhaps this would succeed in those cases in w. y. other
ils. Next to these follows a natural order of plants w. Linnaeus
has called Lurida. They are all poisonous & agree much in Virtues
first of these is y. Bella Donna or Solanum Lethale; and tho it is
nerally looked upon as a poison, w. in reality it also is, yet this does not
vent it from being also employed in Medicine. It has been said y. y. expressed
ice of y. berries, made into a syrup, is a safe & useful anodyne: & a Peasant in
many infused these berries in Wine, w. he employed as a cure for y. Dysentery.
the Author tells y. it has been employed w. success in Cancers; & from y. affinity
this plant bears to some others y. have been used for this purpose, we may
m analogy conclude y. it will be ~~w~~ offensive. Gatacker, who wrote against
famous quack medicine w. Guy employs w. so much success for y. cure
y. Cancers, has some instances of y. ~~being~~ Belladonna being advan-
ously made use of for those complaints, but as there are others again in
it has failed, we must judge of this in y. same manner as of y. hem
h. That it is not adapted for every species of Cancer, & tho it may sometimes
even often fail, yet it should not on y. acct. be entirely banished from our
Materia. Dr. Cullen in his Lectures on y. Materia Medica related y. following
ase: A Woman born of a Mother y. had died of a cancer, & her son, were
both affected w. y. terrible disease. The son had a cancer in y. Lip; y. Mother in
y. Breast near y. Angle of y. Eye. The son ~~to~~ took to y. Belladonna & began
w. ½ grain but by degrees y. dose was increased to 12 gr. of y. dried herb.

[illegible] prevented its spreading & even healed it up to a
[illegible] medicine had also produced a heal & cicatrization of
ulcer; to. was y. [illegible] y. it was given up before y. Ulcer had been quite healed;
Cancer afterwards breaking out again, y. Belladonna was again employed & to.
the good effect as before; but was also again attended to. y. contraction of
ulcer. After this y. Boy was seized to. a vomiting of blood to. carried them
this vomiting of Blood Dr Cullen imputed to y. Belladonna; but he does not
give his reasons for thinking so, & I must confess y. I do not see why
it should have this effect, as it is evidently a sedative. In y. Mother of y. Boy
a Cancer had already subsisted for 15 years: it first began to. a small brown
gradually extended to her eye. She used y. Belladonna to. great caution &
in a very short time found her pains greatly relieved; y. farther extension of y.
Cancer was prevented, good pus was formed, & y. sore at length contracted. In
this state she has continued for 6 years. Whenever y. sore breaks out again
she has recourse to y. medicine, to. which effectually prevents its spreading, & sometime
even goes so far as to make it contract a little, but never heals it
up entirely. There is a case mentioned by Zencker in his Conspectus Pa-
thologiae, to. he calls y. wonderful effect of Belladonna in curing of Cancer & whe-
ulcer, but plainly appears y. a Cancer was radically cured by y. remedy, but the Autho
also at y. same time so honest as to add a case in to. it had failed.
The & y. Cases quoted from Dr. Cullen's Lectures serve to shew y. y. Belladonna
not adapted to every case of Scirrhus & Cancer, to. is also true of y. Hem
lock; but still this does not imply y. either y. one or other are not very
valuable remedy as

Hyoscyamus Henbane

It was employed by y. Ancients as a Narcotic for y. same purposes as Opium
it has been said by some y. it is much more powerful. It has also been said y.
it will produce a quarrelsome humour. It is remarkable y. several of y. remedies
used to. y. Ancients employed in physick have gone entirely out of use, tho they
often performed great cures to. them; & those to. we employ now have been introduced
by chance or by some adventurer in Physick. It is very probable y. we should
now be as cautious of using Opium, as we are of Henbane, Nightshade or
any other of these narcotic plants, had not y. mad & enthusiastic Pa-

these questions, whether they
ye are apt to inquire con
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the motions, whether they be strictly spasms or convulsions.
We are next to enquire into ye. manner of operation; but it is no easy matter
to account for this. Spasms may depend either on too great an influx of
nervous fluid into a certain part, or also to an unequal distribution of
it. This also furnishes us wd. ye. reason why both Stimulants & Sedatives may be
sometimes employed as antispasmodics. It is not however their Stimulating
or Sedative qs. I am here to speak of; but a class of Med. yt. is
neither ye. one nor the other, tho' they may partake of both. Stimulants
generally have ye. effect of increasing ye. circulation: Sedatives have they
also this property; wd. ye. pure Antispasmodics have not. Neither
Antispasmodics poss. any narcotic qualities, wd. Sedatives do; & hence
a class of Med. is diff. from either of ye. other two. We shall however find when
come to treat of particular, ye. Antispasmodics are intimately con-
nected wd. ye. ~~other two~~ Stimulants & Sedatives, & hence they have often been
confounded by most Writers on ye. Subject. Antispasmodics are
taken from ye. 3 Kingdoms of Nature & ye. Virtue seems to reside in
ye. in an essential oil; & in fossiles in somewhat analogous to this.

Of fossile Antispasmodics. Ambra grisea. Ambergris.

There have been great disputes about ye. real origin & nature of Ambergris
it appears however ye. it is neither org. nor anl. it is always found in ye. sea
thrown upon ye. Shores, & ye. by chemical analysis it is found to
contain ye. same principles as petroleum. As it is grateful to ye. nerves
it has been called a cephalic cordial; this however does not tell us what
are its real Virtues. It may perhaps have ye. same Virtues as Musk; but
analogy is of no service to us in this: this is a fossile, ye. Musk
an anl. substance. Expts. therefore only must determine it. Bonny
odors & almost these only are antispasmodic; but odour sometimes resides
in so small a part of ye. subject, ye. it cannot have any effects on ye. body.

Succinum

Of
their hard is still empty
the air or fluids, nor
yet it can have any
only to have only bestowing
of investigating these
been more employed
and Fall, is not ashe
responds any such virtue
it. Yet oil is very
obtain an oil of y. same
tree; on the Virtues of
they may be attributed by
balsamony; all of them
some dyke of party. I shall
all still of

Petroleum

Of
fossile oils have all been
powerful stimulants;
have been extem
can in y. same
purpose, of y. co.
diseases of y. breast
and fleetaneew. There
be
They may of service
they will act always
women for their kinds
consulting any
are still to be
that they be given in

Succinum. Amber.

This has & is still employed in Medicine; but I do not imagine y. it is so
little in our fluids, nor indeed in any menstruum in such a quantity
as we it can have any powerful effects on y. system. It can therefore
only ~~to have~~ only trifling virtues, & by some ~~appro~~ instituted for y. purp
of investigating them, it was found to be really y. case. The ~~ancients~~
have been more employed y. y. Amber in substance. It affords us an
acid salt, co. is not antispasmodic ~~be~~ in its own nature, & if it is found
to possess any such virtues they must be owing to y. oil y. it always joins
w. it. This oil is very similar of y. same nature as Petroleum, & we can
obtain an oil of ~~y.~~ same nature from pitcoal & other ~~bitumenous~~ fossils,
tar: so the virtues of fossile oils are then in general y. same, except
as they may be altered by fire co. gives them more or less of an empyreum
or bituminy: all of them by proper rectification may be brought to y.
same dyke of purity. I shall then treat of them all together under y. ge
neral title of Petroleum

The fossile oils have all been reputed antispasmodics, but then they are also
very powerful stimulants; & ~~by this means~~ on y. acc. often improper to be used.
They have also been esteemed pectorals: but you are to judge of them
in y. same manner as of acid in general y. are employed
for y. purpose, & of y co. I treated before, when I told you y. many chronic
diseases of y. breast were of an inflamatory nature & aggravated
by acid substances. These fossile oils have also been reckoned emenag
gues. They may be of service in spasmodic affections of y. uterus; but ev
en then they will not always be successful. They are so highly esteemed by
Women for these kinds of complaints y. they use them very freely,
without consulting any physicians, & those of bad fame will sometimes
make use of them to procure an abortion; but they will not have their
effect tho they be given in large doses; tho they may be attended co. other

ed consequences. I me
to wd much w. in of
therefore y. effects of
Gilde oil have also bee
have in common w. the
their effects are much
They are anointed on
of Virtue has been fe
ber been they can hav
to with disappoint us of
the swelling, upon at
the heat; but the swelling
Inflammation & tendency to
tion of petroleum. Both
bad fomenting or optional
might happen in those
ed on some fault in y
the paralytic cause. They
and externally applied;
Where them capable to
the day y. fever; nor ha
the without by being rubbed
the fibres & w. advant
ten by its stimulan

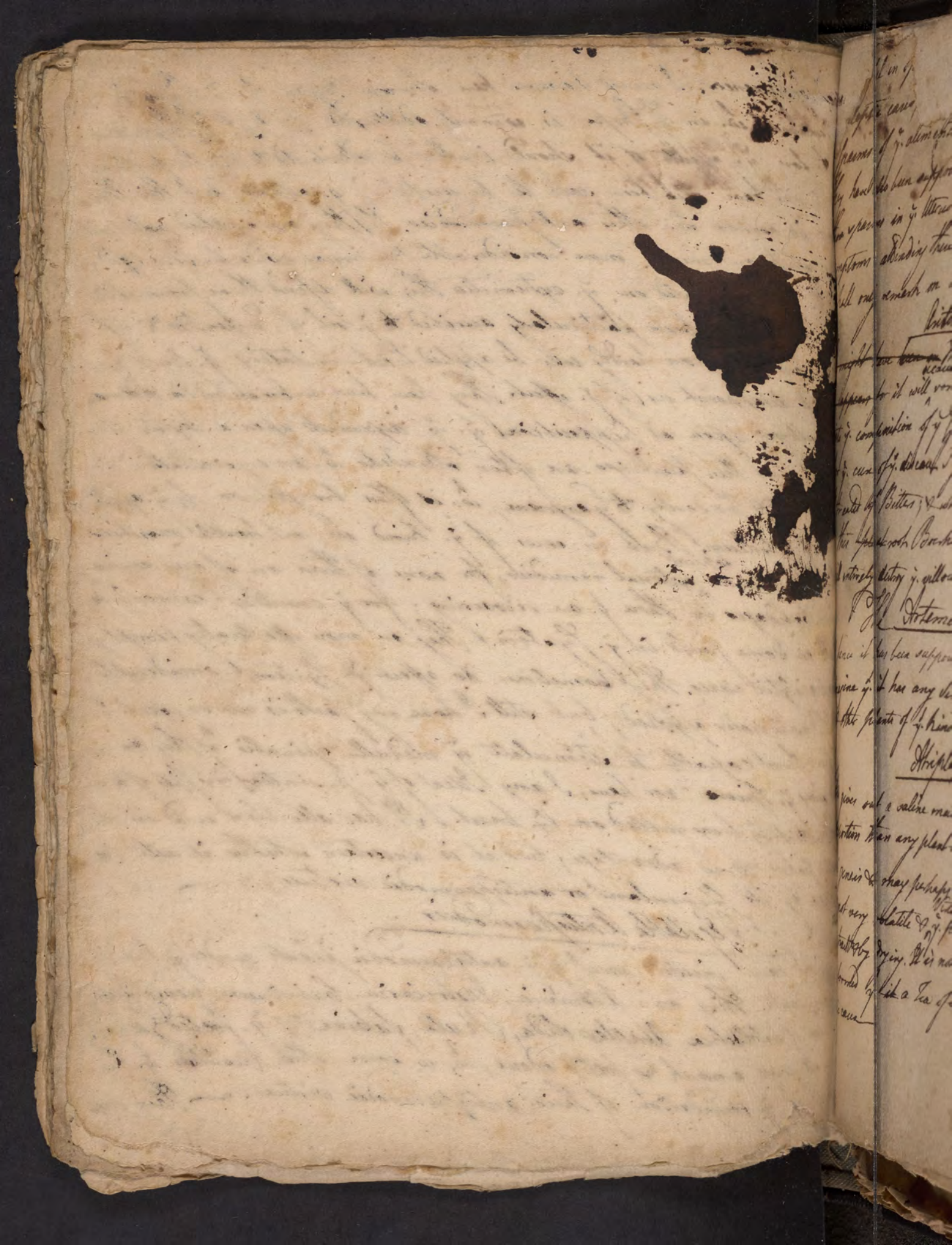
Vegetable

might have invited m
stimulants. They are: d
Rhus, Aristolochia, Atropa
the all pory a rank & fo
proof is y foundation

bad consequences. I must however here observe to you y. y. Petroleum
y. we meet w. in y Shops is commonly adulterated w. 2/3 of turpentine,
therefore y. effects of it should rather be ascribed to y. turpentine
Dill oils have also been said to be useful in quartans; but this they
have in common w. other antispasmodics. If they are applied externally
their effects are much more considerable & more evident. It is said y.
if they are anointed on y. extremities they will defend them from cold.
This virtue has been particularly ascribed to y. oil of Turpentine & of
amber; but they can hardly ever be applied without irritating y. part &
so will disappoint us of y. effect. They have been recomended in edema,
or flueliego, upon a supposition y. y. depended upon a laxity of
y. part; but these flueliego are often attended w. an exasperation in-
flamation & tendency to gangrene, w. is often brought on by y. appli-
cation of petroleum. But in cases of y. kind we not trouble ourselves
about finding out topical external remedies, for none of them are of any service,
except bandages in those y. are recovering; for y. swelling commonly de-
pends on some fault in y. System. They are more effectually employed
in paralytic cases. They sometimes do affect y. System considerably
when externally applied; but still I have my faith is not so great y.
believe them capable to stimulate y. medulla spinalis if they be rub-
bed along y. Spine; nor have I any Idea of y. preventing y. fit of an
intermittent by being rubbed on y. breast. It has also been used in Rheu-
matic pains w. advantage; but it is uncertain whether it acts in
this case by its stimulant or antispasmodic virtues.

Vegetable Antispasmodics

I might have inserted most of y. antispasmodic plants under y. head of
Stimulants. They are: Artemisia, Matricaria, Cuminum, Levisticum,
Valerian, Aristolochia, Asplenoides, Ruta, Sabina & y. fœtid Gums.
They all poss a rank & fœtid odour, w. some other qualities w. they
poss is y. foundation of their antispasmodic virtues. They may



ful in y. [illegible] Some of them have also been recommended
hysteric cases, pretty however. They have been much given in cases
spasms of y. alimentary canal, when they are of y. hysteric kind.
have also been supposed in a particular manner uterine & to take off
spasms in y. uterus &c. on y. cause of menstrual obstructions & y.
mptoms attending them. Then are y. general qualities of these plants.
shall only remark on a few of them

Aristolochia

~~might have been an~~ This contains a considerable degree of acrimony
appears for it will excite vomiting if it is given in large doses. It enters
to y. composition of y. Gout powders, & has in all ages been famous
y. cure of y. disease. I gave you my opinion of those powders with
treat of Bitters; & shall I said they will also apply extremely well
this plant root. Boerhave & Haller tell us y. by a long use of its
entirely destroy y. villous coat of y. stomach

The Artemisia is more fatid than y. rest of y. genus
hence it has been supposed a more efficacious medicine; but I do not
agine y. it has any virtues but such as are in common to Wormwood
other plants of y. kind

Atriplex olida

It gives out a saline matter both in a volatile & fixed state, in greater
portion than any plant I know. It does indeed seem to be a plant
genus & may perhaps contain some peculiar virtues. Its odour
not very volatile & y. virtues of y. plant can be extremely well preserved both in
tract by drying. It is not much used in Medicine at present, tho I am
formed y. lit a Tea of it has pretty been used w. advantage in hysteric
cases

Price

plant does
virtues of Natural
to combine virtue than
may therefore get its
an opinion. Once has
Oysters complaints
loyed in these cases
the plants is. These
said to destroy Worms
Then Once
plants in sufficient
complained in Oysters
Quicksilver is infest

Rue

plant does [illegible] in a great portion of essential oil, on w.h. the
virtues of the plant pretty depended, yet it has rather a stronger
anodyne virtue than any of y.e rest. The parts are very much fixed;
may therefore get its virtues either in y. expressed juice or in y. form
of extract. Rue has in particular been recomended for y. cure of epilep
hysteric complaints; & it is certain y. if stimulants are ever
loyed in these cases w.h. advantage Rue will have good effects.
the plants w.h. I have just mentioned have been called anthelmintic
aid to destroy Worms; but none has been more recomended for
purpose than Rue. If we give it internally it will scarcely arrive
y. parts in sufficient quantity to destroy Worms; it is therefore
ly employed in Clysters to destroy y. particular species of Worms calle
Quarders w.h. infest y. Intestinum rectum

Sabine

is contains more of essential oil & is also a more powerful stimulant
any of y.e rest & indeed it has even been said y. external applica
tion of it will have y. effect of destroying Worms. I can cannot however
from this by my own experience. If given internally it has y.
ne virtues as y. former — This plant has long been suspected
having some peculiar virtues by w.h. it readily procures an abor
tion; & hence you will also find y. almost every author has been
solicitous to caution as how we prescribe it for suspected persons. Had indeed y.
vulgar opinion is so common y. many Women make use of it in
der to save them from publick shame. It is for this reason y. in
any countries in Europe an Apothecary dare not sell it to any
suspected person — The plant has much greater virtues ascribed to it than
it merits; for it does not possess any such virtues but as a stimulant.

Bot.

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it is a substance [illegible], & as it is y. only instance wherein y. Anthera of flowers are employed in medicine. It has been long esteemed as a fine good sufficient remedy by physicians, but none of them have properly said what these virtues are. They have confined them to general terms. I am certain y. in small doses it has no effect at all; & even in y. largest doses y. Physicians generally write it has no perceptible virtues. I have known fm experts that have been at co. great accuracy & judgment y. it will not act unless given in very large doses, when it seemed to stimulate y. System in general. It has been recommended as an emmenagogue, & I have known y. evacuation come on whilst this medicine was used, but then y. evacuation might come on naturally, not be y. effect of y. medicine; for I have often seen it fail than expected. It has been reckoned a very great Cordial & exhilarant, also an anodyne & antispasmodic; but I could never perceive these effects from it. I am sorry y. great & Man as Boerhave should be so lavish in bestowing praises on a remedy little deserves it. I imagine he has been led astray by y. vulgar opinion & other Authors of some note.

Nymphæa

I take notice of this because it is still retained in y. ed. pharmacopœa; but London college have now properly rejected it, as y. properties of y. plant seem to be but little known. It has been said y. it is good anodyne, co. is supported by botanical analogy; for it belongs to y. same natural order co. y. poppy.

Wine & Alcohol may also be considered as sedatives & imagine their effects are nearly correspondent to those of opium, so y. what I have said of opium may in some measure apply to them, especially if you recollect what I said before when I treated of Wines. There is only y. difference y. Wine is less Alcohol more inflammatory than opium. The next head of sedatives are in general bitters or in how far Acids & astringents, Neutrals, Emollients & Mucilages order may be considered as sedatives.

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for there are several hot springs, y. are not impregnated w. any matter
y. are perceptible by our senses, w. are equally famous for y.
cure of various disorders as any of y. impregnated waters;
& therefore by explaining y. effects of simple V, ~~Baths~~ imagine
y. we shall also in some measure understand those of compd V.
The effects of y. hot bath seem to be entirely owing to heat &
moisture, as these are either applied separately or jointly. Many
Physicians, both in accounting for y. effects of y. hot & cold Baths
have ~~ascribed~~ imagined y. some of y. Virtues should be ascribed
to y. weight & pressure of y. Water on y. body; but I imagine
y. y. consideration is of so extreme little importance, y.
we can entirely disregard it —— We shall therefore first
consider y. effects of Moisture & heat separately, & then as they are joined.
Water applied to y. Skin dissolves y. mucus w. w. this is natu-
rally covered & at y. same time washes off all ~~y. sordes~~ y. unctuous adhere-
ing, ~~rea~~ opens & extends y. pores, by which y. perspirable matter
is thrown out more quickly & in larger quantities; & y. diseases
arising from an impeded perspiration are prevented. At y. same
time it takes off all acrimony adhering to y. skin, w. may either
bring on ~~&~~ or aggravate diseases. It is therefore necessary y.
in those countrys where perspiration & sweats are copious ~~&~~ y. ~~skin~~ body
should be frequently washed ~~for~~ if people are to enjoy y. health.
Besides y. acrimony that ~~are to~~ adheres to y. skin from copious
perspiration & sweats, there are in some diseases various matters

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lay under y. Skin, from whence diff. humours exude & cover y.
skin, upon y. pores, & thus increase y. acrimony & aggravate y. disease,
Water by ~~its~~ washing & carrying these off, mitigates at least if it
does not remove y. complaint — The effects just now enu-
merated are produced by Water independant of heat; but it is clear
y. these effects will be more considerable & more sudden from warm
~~water~~ than cold Water. — But ~~besides~~ the effects of Water
are not confined merely
to y. surface of y. body, but it in some measure also penetrates
y. scarf skin or cuticula, wh. it softens & relaxes; & thus ~~extends~~ its operation
is extended over y. whole body; for immediately under y. scarfskin there
are innumerable nerves & ~~y.~~ nervous expansions, y. have a very
acute sensation; wh. is increased by relaxing y. cuticula. It has
been said by some y. ∇ applied externally will penetrate y. through y.
skin & muscles & even relax y. ligaments of y. articulations. But
this is not credible; for if we can discover no apertures in y. cuti-
cula but those of y. exhaling & inhaling or absorbent vessels. But
provided it should go through y. cutis, yet how is it to get
through y. cellular membrane replete wh. fat. Besides if this
were y. case oedematous humours must sometimes be
formed; but these are never known to be y. consequence of
bathing. For these reasons it cannot be admitted y. Water
relaxes y. internal parts, in y. manner just spoken of. But
tho y. Water does not arrive at y. internal parts in y. man-
ner I just now spoke of, it may still be imbibed in conside-
rable quantity by y. absorbents that occur in every part of y.
superficies. By y. means therefore it may relax even y. inter-

nal parts. But its chief internal action is performed in a different manner; for by passing through y. lymphatics it dilutes & attenuates y. humours & at y. same time detergs y. lymphatic glands, by w. means it ~~clears them from~~ washes away y. excrements, dissolves y. stagnating humours & by y. means prevents obstructions being formed in them, & even takes off those already formed. It may thus also dilute & attenuate y. circulating humours. It is however a doubt whether it dilutes & attenuates y. blood more quickly by being ~~taken~~ applied externally or when taken by y. mouth; but it is nevertheless certain that in fevers & other complaints when liquids are swallowed w. difficulty, y. warm bath has very good effects. This is confirmed by a remarkable case related by y. ingenious Dr. Simpson late Prof. of Med. at St. Andrews in Scotland. He says: ~~That~~ A young man was seized w. fever & Diarrhoea w. ~~an entire stupidity~~ total loss of his senses, he would or could take no drinks, tho he was almost perishing w. heat: I ordered therefore y. his feet should be placed in warm water: They had not been kept long in y. ∇ before I could perceive a sensible diminution; & ~~afterwards~~ not long after he had a plentiful stool little more coloured than y. Pediluvium. &c.

The heat has also some considerable effects on y. body; & very soon shows y. these effects must be proportioned to y. degrees of heat y. are employed; we are only to take notice here of y. degree y. is employed in our hot baths. This is from 80 to 112 degrees of Fahrenheits Thermometer. If y. heat is below

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80, we cannot expect any effects from it; & it can hardly be
bore above 112. This heat expands & rarifies ye. fluids of our
body, & mollifies ye. solids, by wch. they become more flexible & of
readier motion. It has this effect indeed on all bodies, but
on ye. human body it is much more considerable, for if we
apply a degree of heat greater than ye. of ye. Atmosphere, &
but less than ye. of our body, it always excites an agreeable
sensation; by this sensation ye. Nerves are relaxed, & ye. relaxation
is communicated over ye. whole system. This heat, independent
of ye. agreeable sensation, relaxes ye. Cuticle & ye. subjacent ner-
vous expansion; these communicate it by sympathy to all ye.
nerves of ye. body, & ~~thus~~ alsoe causing universal relaxation. These effects must be
understood to be owing to a moderate degree of heat; for
if we apply a degree of heat greater yn. ye. natural heat of
ye. body, for coeur continue a less degree of heat for a considerable
time, the hot bath instead of proving antispasmodic, proves
a very considerable stimulus. The nervous fluid, or nervous
power, as I ~~often~~ have told you freqly, is ye. principle of
life. The mobility of ye. nervous fluid depends on a certain
degree of heat, or at least is greatly assisted by this heat. For
very few if any animals can live without heat. And I believe
there is no animal can live in ~~a degree of cold ye. freezing water~~ if ye. heat of ye. bodies ~~or in~~ is no greater yn. ye. freezing
point or if ye. ☿ in Fahrenheits thermometer sinks below 32. And in

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and no Quadrupeds can suffer ye. bodies to be chilled near ye. degree,
many animals become torpid & dead in a manner dead if ye.
air is below ye. common temperature, & are again restored to
life by a proper degree of heat. Then show ye. heat is ye. proper
natural stimulus of ye. human body, & ye. if it is applied in a greater
degree yn. ye. natural degree of heat of our body, or tho it be
not so great, if it is continued untill ye. natural heat is confined
& accumulated so as to be by ye. means encreased, it follows of
course, yt. it will prove a strong stimulus; & thus it will not
only indefinitely stimulate ye. sensible & irritable parts, but by rarifying ye.
humors ye. Vessels will be distended & also stimulate ye. contiguous parts.
This is proved by ye. following expts: A person whose pulse beat
82 times in a Minute, went into a bath ye. was heated to ye.
99th degree of Fahr: Therm: & after staying there an hour his
pulse beat 94; & ye. heat of his body rose to 101. A pediluvium
of ye. same degree of heat raised ye. pulse from 78 to 87. In both
expts ye. pulse soon fell to its natural state, & ye. heat of ye.
body was rather below ye. common standard — By ye. bath
ye. body manifestly becomes turgid & ye. veins swell; this is partly
owing to ye. relaxation of ye. parts & to ye. stimulus w. ye. hot water
occasions, by w. ye. humors are determined in a greater proportion
to ye. superficies; this is illustrated by ye. steam of hot water causing
a suffusion in ye. white of ye. Eye. Fomentations also encrease
ye. circulation in ye. parts to w. they are applied, & this is ye. reason
ye. ye. rheumatism is frequently aggravated by these applications, as Dr. Wen-
bingham justly observes —

~~We shall now en~~ Having now considered y. effects of y. hot bath on y.
body we shall in y. 2d. place enumerate y. diseases in wch. it is
proper & useful. In this part I shall follow y. order I did in
y. former part of my Lecture, N. 1. The warm bath by deterging
y. cuticle, & thus preventing a lentor or washing off acrimony, prev
ents & cures many diseases wch. often owe their origin to these
causes. Besides by thus cleansing y. cuticle, it can take away
away all congestions under y. scarf skin or in y. Vessels of y. skin
& thus prevent the diseases arising from these. By relaxing &
mollifying y. cuticle & adjacent parts, it also prevent these conge
stions y. often occasion various affections of y. skin, whether these
be owing to y. rigidity of y. simple solids or constriction of y. moving
fibres. It is therefore a remedy of great efficacy in all affections of
y. skin & cuticle ——

2. I have shewn above y. y. hot bath by cleansing y. cuticle &
adjacent parts, by relaxing & stimulating y. Vessels on y. superficies,
& thus encreasing y. determination & accelerating y. motion of
y. blood in these parts, y. insensible perspiration is considera
bly encreased; therefore all ~~dise~~ affections of y. skin owing to
an obstructed perspiration are removed by it. I have also in y.
some of these Lectures frequently had an opportunity to tell you y.
y. Dysentery, Diarrhoea, Vomiting & innumerable other diseases
are owing to an obstructed perspiration; the hot bath by restor
ing y. will remove these disorders —— But by this deterging, relaxing
& stimulant Virtue y. hot bath not only cures those disorders y.
are owing to an obstructed perspiration; but there are many diseases
y. tho they do not owe their origin to this cause, may nevertheless be

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readily cured by encreasing ye. insensible perspiration. For as those
atoms of our humours ye. are vitiated are continually carried by
perspiration; it happens sometimes ye. a greater quantity become
vitiated than ye. natural perspiration ~~cale~~ can carry off, in this case
encreasing ye. perspiration, we prevent the diseases ye. are ye.
natural consequence of corrupted humors confined wch. in ye. body.
For an instance a Scurvy, wch. is ye. common disease of cold Coun-
tries, especially where cold & moisture are joined, & hardly ever
occurs in warmer climates; & I make no doubt but ye. hot bath
would generally prevent it & freely cure it — Rather ye. an encreased perspi-
ration not only carries off ye. ~~natural~~ humours ye. naturally become
vitiated in our body; but there are also many ~~external~~ foul matters
conveyed into our body by contagion & other means, ye. must again
be expelled by ye. ways wch. nature has provided for these purposes.
If ye. lues venerea, wch. is one of these poysons, must be carried off
by some of ye. Excretions; perhaps we might expel it by any of
ye. secretory organs; but we certainly have not hitherto learned to
do it by any more effectually nay. by ye. insensible perspiration or
by sweat, & we know for certain ye. by these evacuations alone
it may be cured. Therefore in this disease, tho we do not trust
entirely to ye. hot bath, yet we may perform ye. cure in a much
shorter time by ye. use of it. But I by you will observe ye.
while I thus prove ye. hot bath to be ye. most effectual remedy
for promoting ye. perspiration; it ~~is~~ at ye. same time renders ye.
body much more susceptible of cold & exposes it to dangers on ye.

y. both ~~to~~ on acct. of y. increase of y. perspiration, as also y. it
dies y. body more ~~susceptible~~ sensible & irritable. And it is for
reason y. it can be employed w. much greater safety in y.
more climates than in y. cold. But even in these climates we
ould take great care y. a person does not catch cold immediately
comingy out of y. bath; and Galen, who inhabited a warm climate
ndently observes: y. cold should be studiously avoided after bathing.
The hot bath by relaxing y. Cuticle & skin, & increasing y. evacuation
y. Vessels of y. superficies, takes off ~~all~~ y. obstructions y. are formed in
parts. Hence it is often of great service in inflamations, Phlegmons
of y. skin & subjacent parts. If we except ~~y~~ one species of in-
mation viz. y. Erysipelas; for in this disease there is an exud-
tion of an acrid fluid, & on y. acct. moist applications are
proper than dry ones w. absorb y. acrid matter; as I had
asion to mention when speaking of Exsiccants.
The hot Bath by relaxing y. Vessels, increasing y. impetus of y. blood,
determining y. influx of y. nervous power ~~into~~ to y. part affected
ues ~~up~~ atrophy ~~or~~ It also by increasing y. flow of blood & ner-
ous fluid to y. part is of service in a partial paralysis. Bath
may also be of service in an Hemiplegia & more general re-
ation of y. parts, provided they be not owing to congestion of
od formed in y. brain.
I explained above how y. hot bath by relaxing y. superficies
y. body, also extends y. relaxation over y. whole system

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it is to this effect that by a continued use of y. bath we may relax y
ese y. contracted & rigid ligaments & tendons. Also correct &
bring to their natural ~~state~~ position & form y. contractions
& contortions of y. extremities. This effect however is not to
be solely ascribed to y. relaxation occasioned by y. balneum,
but also by encouraging y. influx of blood & nervous fluid to
y. affected part, & thus taking off y. dryness & rigidity y. was
occasioned by y. want of y. influx. It is of great use in contra-
ctions of y. fingers & toes, for by exciting a fuller influx of y. ner-
vous power into y. extensor muscles, they are enabled to over-
come y. contraction of y. rigid flexor muscles. Probably by y. same virtue
of relaxing & restoring y. proper power to y. nerves & arteries, y.
hot bath ~~[illegible]~~ cures a chronic rheumatism, where there is
often a paralytic weakness joined w.th y. rigidity of y. fibres.
I have shewed above y.t y. relaxing power of y. bath is not
confined to y. parts to w.ch it is immediately applied; but is by
means of y. nerves extended over y. whole system, & more par-
ticularly to those parts that have a more immediate con-
nection w.th y. superficies of y. body. I observed to you in my
Introductory Lectures y.t y. Stomach, Intestines & y. Viscera
of y. abdomen had a greater sympathy w.th y. superficies than
any other part of y. body. It is on y. acc.t y. either heat or
cold applied to y. extremities has a ~~more~~ very quick & remar-
kable effect on y. Intestines; & it is for y.s reason y. y. hot

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am in y. 8th place to speak of y. use of y. hot bath in fevers.
his is remedy wh. was much employed by y. Ancients in their
baths, & they give it as small encomiums. Gilchrist also says
later many cases where this had been of use after other remedies
had been tried to no purpose. The Warm bath or Pediluvia take
off spasms, promote an equable circulation & make a derivation
from y. head; they dispose the person to sleep, & have this effect in
healthy as well as sick persons. It has been freqly found y. when
a patient is restless & begins to rove, if he is then taken out of bed
& put into a warm bath of a proper temperature, wh. I told you
was about 100 deg. of Fah. Therm; he becomes drowsy & sometimes
even falls asleep before he can be put to bed; but if he is
put into a bed, y. has been previously warmed, he generally falls
to sleep, a gentle sweat breaks out, & he find himself greatly
relieved on waking. A quantity of y. water is also absorbed & by y.
means y. warm bath may be looked upon as a considerable di-
luent & attenuant. If y. Arms & Legs are freqly bathed wh. warm
water, y. heat & dryness of these parts, wh. is a very disagreeable
& general symptom in fevers, is taken off. The Pediluvium is
of great use in topical affections of y. brain, delirium & subsul-
tus tendinum or twitchings of y. tendons. When y. feet are
cold, wh. is a freq. symptom in fevers & owing to y. spasm
wh. is always strong in proportion as y. parts are removed from y.
heart, pediluvia or footbaths will alleviate it considerably. When
y. Urine passes of in large quantity, & is of a pale colour & limpid, wh.
generally is a sign of a Delirium coming on, you cannot em-

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by a more effectual remedy than y. warm bath or pedilavia.
It was formerly y. practice to cut up Animals alive or newly
killed & apply them to y. soles of y. feet for these symptoms;
and it we have many cases of their being of great service; w. I imag
ine is entirely to be attributed to y. heat, & y. they in this
we act in y. same manner as y. warm bath; & in general
they are less effectual than y. latter; besides having y. disadvantage
of many persons will be affected considerably by y. practice as
it savours somewhat of cruelty. — The warm bath has
a preference to almost any other remedies y. can be applied in
these cases. I observed to you before y. Heat joined w. Moisture is
a most powerful emollient to animal fluids, & emollients in
general are antispasmodics. In this case too we have y. emollient
applied to y. surface of y. body, where y. Spasm is situated, &
therefore immediately to y. part where it can do y. greatest ser
vice. From these circumstances we should imagine y. y. warm
bath might be indiscriminately applied in every kind of fever,
but we must make an exception here; for we find y. it cannot
be always employed in inflamatory fevers, & is particularly
hurtful sometimes in topical inflamation. In these last kind of
fevers y. spasm is only symptomatic & owing to y. pain & inflamma
tion, y. relaxation of y. skin can therefore be of little service whilst this
stimulus remains. I also told you y. y. hot bath proved a stim
ulus under some circumstances, & in this case it will prove hurt
ful in every kind of Inflamation. If we guard against this effect
in y. cure of fevers y. depend on general spasm, & in those y. are either

founded on or induce debility, there is no remedy wch. has so evident a conjunction of stimulant & antispasmodic effects, wch. we so frequently have occasion for, particularly in nervous fevers. And it is in cases of this kind yt. yt. ingenious Dr. Gilchrist has found it attended wth surprizing success. He relates one case ~~wch. almost exceeds probability~~ wch. proved yt. great use of yt. warm bath. This was a Woman yt. had been upwards of a Month in a fever: yt. first fortnight she slept none: yt. second she was delirious wch. a great subsultus tendinum, & had a constant disposition to sleep; out of wch. she frequently started, perpetually talking; by keeping her in a bath for ½ hour these symptoms grew easier, & by yt. frequent use of it she recovered entirely. ~~Also~~ He has also a case of a woman in childbed, whom he did not expect to live 24 hours, & ordered the bath merely that he might seem to be doing something, but wch. out yt. least hopes of success. This patient was quite delirious, knew no body, could speak none & had yt. rictus sardonicus, wch. is one of yt. worst symptoms in a fever. Her eyes were inflamed, & she catched at every thing; her pulse was to yt. highest degree irregular. To my surprize, says he, I was informed next morning yt. she had got some sleep after yt. bath & was better in every respect; & by repeating yt. bath daily her health was entirely restored. These cases shew you what an agreeable remedy this is if it is applied properly & wch. discretion. It is chiefly of use in yt. nervous fever & all kinds of fever where there is a moderate stimulus & antispasmodics are indicated. It often happens yt. Women ~~newly~~ after being delivered continue restless & wch. out sleep; Opium is yt. common remedy employed in these cases, & it is frequently of great service; but sometimes it does happen

the Opium, instead of relieving, will aggravate ye. symptoms, when ye. warm bath will remove them effectually. But ye. difficult administration of this remedy often ~~obliges us to abstain~~ restrains us from prescribing it. It can therefore in general only be conveniently applied to ye. lower extremities; it is indeed of more use to apply it to these ye. to any other parts of ye. body, for tho ye. Spasm be general, yet we find it strongest in those parts that are ye. greatest distance from ye. heart. It is also applied wth. more safety to ye. Legs than to any other parts, on acct. of its stimulating quality. But sometimes we cannot even the Pediluvia, as ye. patient cannot bear to be moved: in this case we must take to fomentations, & perhaps these are as efficacious as Immersion. But here much depends ~~but~~ on proper management, & ~~must~~ we must be particularly careful not to wet ye. bedcloaths. I shall give you the method wch. I found to answer best for applying of fomentations to ye. lower extremities. The bed linnen should be removed & then doubling a Blanket lay it under ye. patient so ~~as to c~~ ye. you may cover him wth. it from ye. middle down to ye. feet. ~~two small blankets~~ The patient is to be covered wth. one or two blankets according as ye. weather is hot or cold. Two small blankets are to be at hand, one of wch. is to be dipt in ye. Water & applied to ye. persons Legs & Thighs; & one of ye. blankets ~~on~~ wch. he is covered is to be rolled round him for to confine ye. heat; when this one begins to lose its warmth ye. other small blanket is to be applied in ye. same manner, & ~~then they should~~ in ye. way we should continue for ½ hour, an hour or more according as it is necessary. ~~When~~

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It is an established fact y. y. Warm pediluvium has y. power of causing revulsion & derivation from y. head & other parts. There is therefore nothing more common than its application in y. Small pox, in order to save y. face & by causing a greater determination of humours to y. Legs, to draw y. Small pox to those parts. In this case however we must take care & not let y. patient sit too long in y. Water; for otherwise y. pulse will be quickened & y. circulation in y. whole system encreased; by w. we will promote y. effect we intended to prevent. Another caution to be observed is, y. y. patient should ~~not keep his~~ studiously avoid keeping his face ~~of~~ over y. warm water; for ~~as soon as he~~ if he does, y. pots of y. face will be relaxed, w. will occasion a greater flow of humours to y. part, & y. Small pox will be also break out in greater numbers.

The hot bath by taking of y. rigidity, tension & constriction of y. solids, & at y. same time by its heat stimulating them, not only drives y. blood & quickens y. circulation in y. parts to w. it is immediately applied, but has this effect also on those parts that are connected & sympathize w. those. Hence y. hot bath seems to be well adapted to promote y. menstrual flux, ~~& it restore it when suppressed~~ ~~to~~ remove a suppression of y. Menses & piles. This is further confirmed by a fact that every person in y. least ~~acquainted~~ conversant w. Medicine, is acquainted w. viz. That y. body is to be kept cool when we want to check any preternatural or too great hemorrhage: & that by y. application of cold alone we often have it in our power to ~~stop~~ put a stop to them; ~~Heat~~ It is therefore natural y. heat must have a contrary effect

& Dr. Blagden found that they could remain in a room where ye Fahr. thermometer stood at 210 above the freezing point for seven minutes; that even ye 260th degree could be submitted to with tolerable ease. Beef weighing 32 pounds was put up for half an hour in a room where the thermometer stood at 220 & rose by degrees to 236 — The Animal shewed no other uneasiness than panting & hung out its tongue; appeared perfectly brisk & lively on getting into the cold air & felt no inconvenience afterwards. — In this heat Eggs were roasted quite hard in 20 minutes; & in 47 minutes a beef Steak was not only dryed but almost dry. — These Experiments totally contradict ye Sentiments of Boerhave & ye greatest Philosophers of former ages, and have given rise to a variety of new reasonings & theories on the subject of our Constitution being furnished with a power of generating cold, to obviate the effects of external heat, as well as that it was endued with ye power of generating heat to counteract ye effects of external cold. — They have likewise led to several important improvements in ye practice of Physick & ye application of ye warm & vapour bath to in a variety of diseases, with a degree of heat that would astonish former Physicians, and with a success that in many instances hath exceeded expectation. — In all diseases that are either owing to, or attended with an obstructed perspiration; in scrophulous & venereal cases, and indeed in a variety of Complaints ye cause of which not within the reach of internal remedies, these baths have been found very efficacious. In many instances the addition of particular medicinal substances form medicated baths adapted to peculiar diseases; and you may readily imagine what an effect must be produced on ye constitution when such an astonishing degree of heat is applied to act as a stimulus, whilst ye superficies is relaxed by ye moisture of ye vapour or water. In many instances persons have been relieved who have been deemed altogether incurable —

As y. hot bath has y. power of determining a great quantity of blood
into y. parts to w. it is applied, it must therefore by being
applied even to a small part of our body cause a considerable
flow of blood towards it, by w. a large quantity comes to y.
other parts, & especially to those w. are at y. greatest distance
from y. part to w. y. hot Water is applied; by this remedy
therefore we can relieve any part to w. there is too great
determination. So those diseases where there blood is carried in
too great quantity to y. head, or if y. circulation is too violent to y.
place, y. warm bath kept for some time in warm Water will
remove y. headach & delirium y. are often y. consequence of this.
There have been some Physicians who have doubted of this, because
y. heat of y. Water has often y. effect of stimulating y. whole sy
stem. It is true indeed y. y. bath either applied to y. whole body
or any particular part will have this effect, if y. Water be heated
above y. degree y. I said it should be; but then if it be applied
only to a part of y. body, it is probable y. y. it will stimulate y.
part more y. y. rest of y. system, especially if y. heat be moderate.
Therefore we say y. a bath applied only to a small part of
y. body, will have no great effects in stimulating y. whole sy
stem. This might be proved by several Arguments; but these are
superfluous in this case & it is better to take y. word of learn
ed & candid Men, who may have experienced its good effects &
say in headaches & other complaints of y. head, & never found
any bad consequences attending its use in these cases

~~The~~ Two observations that I am next to make, are not immediately connected with warm bathing, tho they naturally enough arise from what was said on that subject: The first proves in the strongest manner the great quantity of water that is received into the body by the absorbent vessels & particularly when there is a want of moisture or fluid in the system: — Some unfortunate mariners, whose vessel foundered at sea, & who took the long boat, the last resource of them in that wretched condition, were perishing for want of water, when either by accident or design they ~~[illegible]~~ plunged into the sea to bathe, & found in a little time that their thirst was quenched, the uneasy & almost insufferable sensation that arose from ye want of Drink was removed, & the engaging sensation by urine confirmed the absorption of water. They had recourse to the same method for relief, whenever they were urged by thirst & always with the same success. The discovery was esteemed of such importance, that Dr. Franklin wrote a short essay, which was published in order to make the fact generally known, that persons exposed to similar misfortunes, might avail themselves of the same means to preserve Life —

The second observation was lately communicated to me by a gentleman who experienced the greatest relief from ye application himself, & hath recommended it to others who usually have benefited by the application. — This gentleman was subject to a most violent headach, which had continued for several years. — He had never been subject to the

In ye. last place I shall observe ye. ye. Water being absorbed in large quantity necessarily passes through the Lymphatic ducts & glands by wch. ~~over~~ it washes off ye. acrimony, dilutes ye. too spissid juices & by ye. means prevents & takes off ye. obstructions & other affections of ye. Glands. It is therefore often of service in a Scrophula, wch. has its seat principally in ye. Lymphatic System. By ye. warm bath, especially if it be made of Broths or be impregnated wth. matters ye. are fit to afford nourishment ~~to our body~~, we may nourish ye. body, when ye. Deglutition is by any means obstructed. And there are Instances of persons being kept from starving by Baths of this kind; Gilchrist has an Instance of a Woman ye. recovered her strength surprizingly by a Bath made of Broths, tho he had despaired of her life.

Warm bathing hath of late years been introduced into more general practice than it was in any former Period.— The Ble. de d'Autroche, a gentleman of a truly philosophic mind, observed in his travels to Siberia that ye. Inhabitants of that cold climate had recourse to warm baths to remove the ~~obstructed perspiration~~ disorders occasioned by an obstructed perspiration from ye. nature of their Climate, & that their baths were heated beyond what ye. Inhabitants of Europe had any Idea of. Experiments were some time after made in France to determine the degree of Heat which ye. human constitution could bear; these have been since prosecuted farther in London, & from these it appears that the degree of heat that we can submit to is not only incredibly great but confounds all our former reasoning on the subject. Sir Dr. Fordyce

headach, untill after recovering from a malignant fever which left ~~him debilitated~~ him subject to this distressing pain, attended with a coldness in the feet. As he was himself a Physician he had recourse to every medicine & application that he had ever heard or read of; but in vain. Having been a Student under Dr. Cullen, & entertaining the highest opinion of his abilities in Medicine he went to Edinburgh, & submitted to every method proposed by that great man, but to as little purpose. He next tried the most eminent Physicians in London; but their art was equally ineffectual. He gave up the point, & saw no remedy but patience, to against a disease that rendered life a burden, & disqualified him entirely from prosecuting his profession. He was on his return home, when he accidentally fell in with an old friend, who had been a fellow student in Medicine at Edinburgh. To him he gave the melancholy detail of his sufferings & the hopeless state he was reduced to. His friend persuaded him to entertain better prospects & gave him assurances of relief; provided he would remain with him a few days & make use of a simple domestic remedy, which had never failed to relieve y. coldness in the feet, by ~~bathing~~ restoring the determination & circulation to those parts, & keeping them in a state of perspiration, was the summit of his wishes, as he was convinced that his relief depended on this. He complied with his desire, &

of Emollients. These are such remedies as will relax the rigidity of the solids, ~~and~~ diminish their cohesion & introduce a larger quantity of fluid or Moisture. They are therefore indicated in leanness, dryness, contractions &c. — All substances y. contain a large proportion of mucilage, Oil or Water are emollient, and it is of very little consequence which we employ for y. purpose: Warm Water will almost answer every intention for wh. this class of remedies is generally employed; and I have been very diffuse on y. subject, I have few remarks to make on the other substances generally employed as emollients. —

Of the mucilaginous Emollients y. radix Althea or Marshmallow root deservedly holds the first place. It is applied in swellings & Inflamations &c. as a poultice; but we also prescribe it frequently for internal uses. In this case we boil or rather infuse about an Ounce of y. root in a Qt. of Water. This affords us an excellent remedy when an acrimony in y. fauces or primæ viæ takes place; but particularly in chronic dysenteries when the patient is often afflicted w. dreadful pains & gripings from y. Mucus in the Intestines being abraded. In respiratory plains a decoction of y. root is also attended w. very good effects. When a violent purging and griping is brought on by too strong a cathartic, and an inflamation of y. bowels is to be apprehended we should order a decoction of this root to be drank plentifully. The root boiled in redwine makes an excellent Mouth wash preserves y. teeth & keeps them clean & is also much better for Children and teething than y. substances commonly given to them for this purpose; for it is soft & yields to the pressure of y. Gums. The Mucilage suddenly takes off y. pain & Inflamation occasioned by a blister & when drank plentifully prevents y. Strangury w. is often occasioned by blisters.

in four days was entirely relieved of the redness in his feet & never felt the headache after. — Bay salt performed y. cure & ~~was~~ is to be administered in y. following manner. — The salt is to be m perfectly dry before a fire, & then reduced into an impalpable powder. This is to be quilted into a linen cloth, sewed on the inside with fine tow, adapted to the size of the foot, & the thickness must not exceed ~~the~~ a crown piece. On first applying, it is to be sprinkled with a little Vinegar & warmed before the fire, & worn between the stockings & y. feet day & night. — The effect from wearing it is that it keeps the feet in a comfortable heat & gentle perspiration. He assured me that he had never known it fail. — I have recommended it in one case; it produced the effect to such a degree, as to moisten the linen through, & as to oblige them to change the application every night. If you recollect that I told you, common Salt was an experiment found to be the most powerful stimulus to the animal fibres, & that the cure of headaches & many other disorders depended on giving a proper determination to the fluids & restoring an equable circulation, you will easily account for the manner in which this simple application produces y effects. — On a former occasion I mentioned the use of Salt in Lemonshaps, & that it was a domestic ~~medicine~~ remedy, & that it at length from repeated experience been adopted by Physicians & employed in Medicine. — I would therefore recommend it to you, never to slight the experience even of old women; in the two instances just mentioned you have a proof that it is always usual for y. Physician to discover the virtues of medicines. I might add that every medicine of any efficacy employed in Physick is either the chance discovery, or first introduced by Quacks & illiterate People

root may indeed be employed wherever emollients are indicated: eg in an
cion of y. Intestines; Strangury; pleurisy accompanied w. a dry cough
d in a tickling ~~in~~ y ~~to~~ aspera arteria by w. a cough is occasioned: to stimula
nitigate inflamations; maturate Abscesses; take off pain; to cherish
ith excoriated & defend them from an exudation or discharge of
ied Serum ——— Semen Lini. Linseed. Its answer y. same purpose
y. Marshmallow root, and is frequently employed internally & externally
y. same disorder. Linseed tea is useful in an ardor Urine, nephritic
ins, coughs pleurisy &c. — The meal or powder of linseed is highly pro
for poultices & external applications where our purpose is to relax, mata
te & take off pain. Linseed oil is less apt to turn rancid than most
r oils & is ordered both internally & in Glysters in Calculus; nephritic colic,
ues &c. ———
Gum Arabic & Tragacanth are chiefly employed for internal uses: their
virtues are analogous to y. Marshmallow: And all emollients and co
ng like in their effects that it would be only enumerating the same things
under each head: ~~All~~ Our choice is only to be determined by their agre
ableness & convenience ———
For external applications we generally use y. different farinaceous & perhaps
a poultice of bread & milk is equal to any of y. most compound &
apparently artful compositions: especially if we add a little Oil to
prevent y. dryness & fissure of the skin w. is frequently occasioned by
along continued use of these remedies ———

y. Patient said
eed by Worms.
ection almost y
stomach being troubl
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ular signs by
ers y. patient
tomach by a.
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before w. Justice said y. there is no disease so extraordinary but what may occasioned by Worms. And if a person labours under any uncommon disease first question almost y. a physician asks, is, whether y. are any signs y. patient being troubled w. Worms. I shall therefore now give you y. Symptoms general by w. we can know whether a patient has Worms & afterwards particular Signs by w. we can determine under what peculiar kind Worms y. patient labours.

Symptoms then by w. we judge y. Worms are in y. body are these: A bad colour of y. face & countenance: a pref. change of y. colour from pale to red: Circles being under y. Eyes; Itching of y. nose; freq. headaches, w. come on immediately after meals: A quantity of watery saliva in y. Mouth on waking in y. morning; w. also runs out of y. Mouth during ~~the~~ y. time y. person sleeps y. Night; a disturbed sleep w. startings; an inclination to lay on y. stomach; grinding or gnashing of y. teeth; y. person makes ~~the same motion~~ noise in his sleep as if he were swallowing; he often sits upright in his sleep, speaks & ~~calls~~ bellows, but soon composes himself again; faint in y. Morning on waking; freq. fits of fainting; his head pretty turns round, as y. common people call it; Noise ~~in~~ his ears; sometimes an aversion to meat, but generally a voracious appetite; stinking & disagreeable breath; Gums grow flaccid & incline to putrescency; Vomiting; difficulty of breathing; pains in y. belly especially in y. umbilical region; y. belly feels hardish & feels very sore; a great rumbling noise in y. abdomen y. person perceives a motion w. he cannot

rumbles y. waters of Water; sometimes Drains

faces give a great stench; the

is le

y. rectum & y. so violent, as to make him faint; he is often troubled w.
tenesmus; he is heavy & under anxiety; incapable of doing his business; he cannot
ll what he wants or what ails him; he cannot pretty speak plain, sometimes
is not able to utter a Word; some turn raving mad; others become foolish;
ome again are taken w. convulsions without any apparent cause: if they
but slight, there is no appearance of froth, otherwise they froth at y.
uth. Some grow rigid over y. whole body, lay about motion or sensation,
ome to themselves ~~awake~~ w. violent convulsions; they then fall into a deep, from w. they awake
pretty sensible, & perceive nothing but a weakness. They recover very slowly
rm any disease; & have pretty palpitations of y. heart. But you are
to imagine y. you will find all these symptoms in y. same person.
is sufficient y. they have some or many of them. And I judged rightly
e girl ~~aged~~ 10 years old y. she had Worms; because she eat a great deal,
continued lean & pale & ~~fretted~~ was pretty confined to her bed at y. decline
y. moon on acct. of pains in her Knees & legs. Another Child wore away w.
any manifest cause, was pretty sick, but never complained of any thing in
ticular. ~~There~~ It had not the symptom of y. Worms but y. it was always found
y. Morning laying on its belly or stomach. This is indeed one of y. most
ain symptoms in Children. & by giving this child a few doses of Calomel
Tape worm came away ~~&~~ & it was freed from any complaint.
ter we are well assured y. y. person is ~~labouring~~ afflicted w. Worms, we
ught next enquire what particular species of Worms he labours under.
e Tape Worm occasions a suction or sucking in y. body, y. person perceives
something were alive w. in him y. rolled itself along his intestines, & is
sible of a Weight in one side. He sometimes voids by stool some of y. Vermes
umbilici or round Worms. — The round Worms are known by pains &
pings in y. belly, particularly in y. umbilical region. The Headache occasion
irritation in y. rectum, tenesmus, & ~~&~~ moreover then more than

In my last Lecture I enumerated ye diffs. species of Worms wch. infested ye human body: ye manner of generation & propagation: ye Diseases wch. they occasioned & ye Symptoms by wch. we could judge ye person was afflicted wth Worms, & ye particular sort ye he was labouring under. I am now to treat of ye remedies ye either expel or destroy them. There are known by ye general name of Anthelmintics ~~Worms~~ wch. signifies as much as Vermifuge, & they may be divided into 2 kinds: 1. Are such as by immediate action ~~kill~~ on ye Worms destroy them, acting in ye manner of a poyson; & ye 2d are those kinds of med. ye act medicinally wie. They do not act as poysons but make their place of abode so disagreeable to them ye they cannot keep possession of it. Under ye head we may in ye first place refer Bitters. Many of these have formerly been supposed to be specifick for ye Cure of Worms; ye chief of them were Wormwood, Rue & ye Sem: Santonici. But they are not found so effectual now as they generally been imagined; & they very seldom will expel Worms unless on some other more powerful Vermifuges be added. ~~They~~ Bitters may however at times expel Worms wout ~~any~~ ye addition of other Meds. For ye bad state of ye a Weakness of ye Stomach & Intestines was almost ye general cause of Worms being hatched there: Bitters by ~~our~~ restoring ye Tone of ye Stomach & encreasing ye peristaltic motion of ye Intestines may be a means of dislodging Worms; it is however better to give them after ye Worms have been dislodged in order to prevent ye future generation. Purgatives may also be employed to expel them. These act in a double capacity: 1st by giving a stimulus to ye Intestines they cause gripings & spasms by wch. the Worms are often carried away wch. ye faces & 2dly by ye taking away ye nourishment they ~~make~~ ~~them~~ so weak ye they cannot keep ye hold in ye Intestines & are therefore freely carried off. Purgatives however are employed wch. better

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y. Mouth, for
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destroy Worm
Ration. Some
Water & let
uncertain way

Purge after some other med. y. have y. power of killing Worms have
been previously given; & that we should give those of y. most acrid
& stimulating kind as Jalap, Scammony, Gamboge & Coloquintida.
The weaker ones as Aloes, Rhubarb & Senna are not adequate to y. purpose: & tho they are very bitter they are greatly inferior to y. others, wch. proves
that I before observed y. Bitters have no immediate power to destroy
Worms. I shall ~~the~~ now consider such med. as seem to have a
peculiar virtue in destroying Worms & act as poysons. These may
be divided into y. mineral & vegetable. I shall first treat of y. mineral
as fitest Remedyes.

Of the weakest of these are y. Saline Substances, chiefly so called, viz. Acids,
Alkalis & Neutral Salts. ~~They are~~ These will not kill Worms quickly unless
they be applied in concentrated state; wch. is hardly possible if they are
given by y. Mouth, for they are so diluted in y. Stomach & Intestines
that they ~~hardly~~ retain very little of y. saline Stimulus by y. time they
arrive at y. place where y. Worms generally are lodged. Sulphur
seems to have a peculiar virtue in destroying Worms of all kinds,
especially if it be joined wd. a Saline Substance & wd. wd. it forms a Hepar
Sulphuris. There occur many mineral Waters y. contain a Hepar Pris,
such as is y. Water at Harrogate in Yorkshire, wch. is very famous
for destroying of Worms. However both Sulphur & y. Salts are
inferior to some Metallic Substances: y. ~~principle~~ chief of these are
Mercury, Tin & Iron. Ever since Mercury has been introduced
as a Medicine it has always been looked upon as a most effectual
Remedy to destroy Worms. It has for y. purpose been given in various
forms & preparations. Some have recomended to boil crude Mercury or quick
silver in Water & let y. patient drink y. Water. This however is at
best but uncertain way of giving it, & in my opinion y. Water passes

o Virtues at all. Others prescribe y. Æthiops mineral. This has little
no effect in y. body as a mercurial medicine; for it is found y. ☿
tirely destroys y. medicial Virtues of mercury: if Æthiops then has
ny effects in destroying Worms it is owing to y. ☿. for it contains ☿
y. reason it should be entirely banished ~~for~~ y. Materia medica.
y. principal ~~the~~ Preparations of ☿ for destroying Worms are Calomel & Corrosive Subli-
mate; & these are few med. y. are more effectual in these cases ~~than~~
~~the~~. — Calomel may be given either per se or combined w. the Subli-
tanes particularly Youngsters. The Corrosive Sublimate is best given in
lubitance made into pills ~~of~~ ½ or ¼ of a gr. for a dose according to y.
e of y. patient. I hardly know ~~any remedy more effectual~~ a more
owerful Vermifuge than Sublimate; but it is a medicine not to
e trifled w. particularly in Children whose Stomachs & Intestines are very irri-
table: I would therefore not advise you to give it unless you have an
opportunity of seeing y. patient from time to time; for fear of y. bad
ncyquences. Preparations of Copper might also be given w.
dvantage, but they are so apt to excite Vomiting y. we cannot employ
em for y. purpose.
n has long been considered as an effectual Vermifuge & is always given
y ~~the~~ Physicians y. it
forbidden. It has been ~~thus imagined~~ by ~~most~~ almost every
ts by its weight & roughness, scriching or irritating y. Worms in such
manner y. they are obliged to fly from it. But y. is by no means
ase for Tin is dissolved by y. acid in y. stomach & it must then
e act on y. Worms as a poison. It appears by some late experi-
Mr. Macgrath of Berlin, who is justly esteemed y. greatest Chemist
w living, y. all Tin contains Arsenic, & I am of opinion y. it is
e Arsenic kills y. Worms. I therefore see no reason why Arsenic
ight not be given w. equal propriety by itself, than as contained in
in. However I would not choose to employ it in either one or y. other
way, whilst there are other remedies to be found less dangerous to y. constitution,

Soon & its ~~fractions~~ have also been employed for y. cure of Worms &
have y. advantage over many other remedies y. they are more likely
to arrive at y. Intestines unchanged. ~~then would be~~ Boerhaave has for y. purpose advised ℥j. of Coppras to be dissolved in
℔j. of Water & ~~drunk~~ y. quantity to be drank in a day, continuing
it for a ~~good~~ considerable time. This medicine at y. same time
also gives a proper tone to y. Stomach & Intestines by wch. y. Worms
are more easily expelled & a relapse prevented.

There are a vast number of Vegetables wch. have y. power of killing
Worms out of y. body & I make no doubt but they will have
y. same effect in y. body: but here I shall only take notice of such
as are or have been employed for y. purpose.

It has been observed y. all fetid plants but particularly those wch. have y.
alliaceous or Garlick smell have y. power of expelling Worms. It is certain
y. Garlick given either internally or applied externally to y. Navel, nay even to y. Soles of y. feet will expel Worms. Asafoetida
wch. has y. garlick smell is also pretty employed for y. purpose. &
generally succeeds. The best way to give these Med. is to give them in
suppositories. The Carolina Pink root, y. Bears foot or Hellebore
& the Spigelia anthelmia ~~and~~ may be reckoned amongst
y. most powerful anthelmintics.

~~The~~ Dr. Lining of Charles Town S. Carolina was y. first who ~~and~~ I think
cated y. Carolina pink root to y. World. He tell us y. y. ~~medicine~~
~~Indians~~ ~~European~~ English learnt y. use of y. remedy from y. Indians &
he found it an excellent Vermifuge. I have seen it tried pretty
generally successful as any remedy of ~~that~~ sort I know. If y. dose be too large
it is apt to cause vertigo, fm wch. I conclude y. it partakes somewhat
of a narcotic power. It may be given either in powder or infusion
& has y. advantage over many others, y. it has scarce any taste, & by

a little Milk &c
ed for Tea. D

Proceeding

Bees sort of
Maryland &c
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tent y. first in
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y animals.
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adding a little Milk & Sugar Children may be so deceiued as to
drink it for Tea. The dose for a child of 3 or 4 Years old is about
12 grains.

The Bears foot or Hellebore fœtidus is a plant y. grows nature
ally in Maryland & Virginia, & is kept in some Gardens here.
It is perhaps y. strongest anthelmintic y. we are possessed off, but
has hitherto not been much known. Dr. Wyld of Germantown
was ~~great~~ some
was I think y. first in these parts y. used it, & ~~gained great~~ some
ended his procedure, w. was composed of y. Species mineral very
famous. It is a very powerful medicine, & should therefore be given
only in small doses at first. 2 or 3 gr. are generally suff. for a child.
The Spigelia anthelmintica is a plant y. grows in y. Westindies &
was first made known to y. World by Dr. Brown who published
a particular
a History of Jamaica. He says y. this medicine ~~has~~ was has been used for
considerable time amongst y. Negroes & Indians, who used y. first y.
new its Virtues, & gave it y. name of Worngrass on acc. of its singular
Virtues in destroying ~~them~~ Worms. He says y. from innumerable
experiments he can pronounce it as ~~a~~ efficacious a remedy against Worms as
bark is against Intermittents, & particularly in fevers & convulsions
in young or ~~the~~ children. They give it in y. following manner: The two
handfuls of y. dryed or fresh Leaves in a quart of Water until ½ is consumed.
Then strain y. decoction & add some Sugar & Juice of Lemon to it in
order to make it palatable; a grown person takes y. quantity about
an hour before he goes to bed. ~~But y. follow~~ It is reckoned best he
goes to give only y. fourth of y. quantity at first, for fear of accidents,
& repeat y. dose every 4 or 6 hours; or if it be child a much smaller
quantity must be first given, w. must only be repeated every 4 hours. This
medicine procures a sleep as certain as y. same kind of Opium, but
in waking y. persons eyes are distended, sparkling & shining, and have
y. same persons as in ~~them~~ persons when y. smell pepper & Nettles are put

I have lately met w.th a book in w.h a decoction of y.e unripe external shell or covering of Walnuts is recommended as one of y.e most efficacious remedys for destroying of Worms. I have not had any opportunity to try it, but I have great reason to believe y.t it will be useful for y.e purpose, as I know y.t it will have fatal effects on Worms out of y.e body —

The Cowitch grows in the form of small ~~hairs~~ filaceous points on the pod of a plant in y.e W. indies. — Its operation on y.e worms is mechanical. For by the points the worms are irritated & pricked to such a degree that their dwelling is rendered so uncomfortable for them to ~~come~~ continue in it. Cowitch is commonly administered in Syrup or Molasses — Horsehair cut extremely fine & administered in this way, acts on y.e same principle ~~& with~~ equal success —

breaking out soon after y. first dose y. pulse becomes regular, y. fever decreases, y. convulsions, if there are any, diminish & all y. symptoms are mitigated: the Worms come in a large quantity either ~~[illegible]~~ at least if a purgative be given; and it is very seldom y. more dose of y. medicine is required. He adds y. he never found y. remedy fail ~~[illegible]~~ if ye was only y. least ~~[illegible]~~ probability of success, & y. he often succeeded wh. th when ye was no reason to believe y. patient could not be saved —— ✱

Oil has also been recommended to kill Worms. For y. purpose oil of Olives or any other aromatic oil is generally employed. It has been thought y. it acts by stopping up y. holes in y. skin of Worms through wh. they draw air. ~~[illegible]~~ Physicians have been led into y. opinion from seeing y. oil instantaneously kills Insects, ~~[illegible]~~ acts in this manner. But there is wide difference between Worms & Insects & hitherto no such holes have been discovered in y. body of Worms: it is also very improbable y. they have ~~any~~ any organs of respiration as they are formed to live in ~~water~~ & Glues y. have no communication wh. y. external air. —— ~~[illegible]~~

I think do not imagine y. oil is so effectual as has been supposed for Worms will live a considerable time if they be put in oil, & it is very probable y. substances wh. have no effects on Worms out of y. body, will have much less ~~by~~ after having first passed through y. stomach, unless they are of such a nature as to be rendered saline by y. acid in y. Stomach —— There are y. principal remedies y. have been recommended for y. cure of Worms in general. But every particular species of Worm requires a somewhat diff. treatment, I shall therefore in a few Words give you y. meds y. are more particularly suited to expel each species ——

[illegible] consider as I have [illegible]
[illegible] of Signature, subsig[illegible]
[illegible] & therefore [illegible]
[illegible] destroy the Soul [illegible]
[illegible] of fat Bacon [illegible]
[illegible] may be [illegible]
[illegible] expected before [illegible]
[illegible] Worse. Gentle Lacta[illegible]
[illegible] free. But the [illegible]
[illegible] Water. This will do [illegible]
[illegible] or round [illegible]
[illegible] method is [illegible]
[illegible] given in the [illegible]
[illegible] are at this [illegible]
[illegible] more readily take [illegible]
[illegible] given in Milk [illegible]
[illegible] very fond of [illegible]
[illegible] or smell to [illegible]
[illegible] way of [illegible]
[illegible] and not certa[illegible]
[illegible] harm in [illegible]
[illegible] taken the medicine [illegible]
[illegible] part of the belly [illegible]
[illegible] endeavour to [illegible]
[illegible] speedy [illegible]
[illegible] a paste of the [illegible]

the Ascarides, as I have already shewed, in fact only y. rectum, & therefore is in
each of Glysters. ~~Salt substances, as well~~ & all sweets kill Worms
effectually & therefore Glysters of Milk & Salt or Milk & Sugar will
not destroy them so soon y. assistance of any other medicine. Some make
a Pessary of fat Bacon & put it up y. rectum, w.h allures y. Ascarides,
& then may be ~~drawn~~ pulled out along w.h y. bacon: this must be
very often repeated before we can free y. patient entirely from y. Hard
Worms. Gentle Cathartics given for several days together will
also expel them. But there is no more effectual remedy than a Glyster
of Quicksilver w.h has been formerly killed w.h Honey & dissolved
in Water. This will do y.m business in a very short time.
Lumbrici or round Worms are not so easily expelled as the former.
The following method is y. best to deal w.h them: The med. should
chiefly be given in y. Morning about y. usual time of breakfasting; for
y. Worms are at this time most eager for food then & any other
will more readily take y. medicine y. is to do y.m business. If
it be given in Milk y. Worms will be y. more ready for them as
they are very fond of it. The patient should not prepare y. potion
himself or smell to it; as the Worms will then endeavour to
get out of y. way of it. This is at least y. opinion of most Physi-
cians; tho I am not certain whether it be well founded: there is
however no harm in observing y. caution. If y. patient soon after
he has taken y. medicine is sensible of very great pains in a par-
ticular part of y. belly ~~&~~ or gets slight convulsions it is a sign y. y.
Worms endeavour to penetrate through y. Intestines. This expelles a
very speedy ~~relief~~ remedy: y. best is to rub y. part w.h Petroleum,
make a paste of y. tops of Wormwood, Garlick & Rye meal, & apply

to y. post-effects.
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if to y. part affected. It is also necessary y. y. patient should abstain
for 10 or 12 days before he takes medicines from meat drink, & should
use nothing but hard & salted meats, Onions, & take every evening at
bed time a piece of salt herring without drinking any thing after
it: for as y. Worms cannot bear this food they will endeavour
to shun it, & creep as low down into y. Intestines as they can:
from wch hence they are afterwards much easier dislodged than if this me-
thod had not been taken. — ~~After~~ When we have reason to believe
that y. worms expelled it is necessary y. y. patient should continue for
some time to take gentle Cathartics w.th Bitters to keep y. belly open
& strengthen y. bowels at y. same time, y. in case any of y. eggs of
the Worms had remained in y. Intestines they should be expelled or
prevented from being hatched. The R. of Rhubarb answers y. intention
better than any other remedy. — If it appears y. there are
worms attending any kind of fever, in w.ch we could not use
any of y. above mentioned remedys, we should endeavour to employ such
as are proper in y. fever & at y. same time destroy y. Worms. If this
kind are Camphire & Vinegar we may combine them & make them
into a Julep: for this purpose take ℥j of Camphire & reduce it into a
fine powder by adding about 15 drops of oil of Wine mix it well w.th about
a Ounce of Sugar & add ℥x of good White Vinegar. The patient may
take about ℥ a spoonful or two every hour, & thus has a Julep y.
answers both intentions better than most other remedies.
~~of Tapeworm~~ The Tænia or Tapeworm is expelled w.th much greater difficulty
than any of y. former. This is owing to ~~its~~ its great length & ~~to y.~~ power of
fastening himself on y. Intestines not only w.th ~~his~~ y. pointed extremity, but
with the suckers tubes y. are in each of y. articulations; & it sometimes
happens y. he will elude y. all y. efforts y. we can make to expel him.

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I have known a very eminent & celebrated physician who takes y. following
method to expell y. Worm. He orders y. patient to live on hunt beef
broth or other salted meats for a Week before he gives any medicine. He
then prescribes some one of y. Vermifuges w.h I mentioned above, &
when he thinks y. Worm is advancing towards y. inferior parts of
abdomen, w.h is known from these symptoms. The patient finds himself
much easier about y. precordia, but perceives some pain in y. abdomen
& a coldness in y. back. I say if then it appears y. y. Tenia is getting
lower down in y. belly he gives y. patient a smart purge of Jallap
& Sy. And orders him to drink repeated & large draughts of cold V.
~~thereof but~~ are to observe to you ~~in my last Letter~~ y. cold water deprived y. Worm of
sense & power of motion. It is therefore probable y. cold V. taken in
large quantities will communicate its chill to y. intestines & affect y.
Worm in y. same manner as if it were poured on him out of y.
body. I have seen this method succeed several times & seen a Tape
Worm 34 feet long y. was brought away ~~by~~ in this manner. The sharp
point came away entire, and was so low fixt y. nothing of y. Worm
was remaining behind — Dr. Hasselquist in his Travels to y. Egypt tells
us y. y. Tape Worms affects many people in y. Country, y. ~~of~~ one 4th
of y. Inhabitants of Grand Cairo, ~~taken~~ particularly y. Jews & poor people,
labour w.h it. They expel him by taking 30 drops of Petroleum in ~~wa~~
water for y. 3 last days of y. decrease of y. Moon, & y. following day
they take a smart purge. If y. Worm does not come away they respect
y. same med. ~~at~~ y. again at y. same time, & it is seldom necessary
to have recourse to it again. Hasselquist assures us y. they never use
any other remedy. I have never had an opportunity to see it tried,
~~I cannot therefore~~ speak from experience, ~~the~~ I ~~would~~ do not however
in y. least distrust what y. candid Traveller says of it.

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Blisters

Blisters are a noted & prof. remedy in fevers. I shall therefore speak of ye. use
these diseases. They are in general improper in ye. beginning of
inflamatory fevers: they increase ye. heat, quicken ye. pulse & raise all
ye. other symptoms ye. depend on an increased circulation. They are
therefore most effectual in ye. decline of fevers when ye. pulse is sunk &
soft; especially if ye. head be affected at ye. time. They are particularly
useful when there is an Inertia of ye. nervous power & in all lethargic
cases. They also take off spasms & pains. It has been imagined
they have ye. effect by exciting a more violent pain & thus drawing
off ye. other & hence ye. known saying in medicine: Dolor Dolorem
tollit. It is in ye. manner ye. operation ~~has been~~ in a pleurisy
other topical inflammations has been accounted for; but they often
take off pleuritic pains without exciting any remarkable pain in
the part to wh. they are applied. It is certain ye. there is not a more
effectual remedy in topical inflammations than blisters, provided they
are applied to ye. part, for if they are put on at some distance from
the affected part they will increase ye. pain; for in this case ye. stimulus
ye. body & increase ye. circulation. But if they are applied to ye. part
affected they draw ye. humours outwards & give them a determination
by wh. ye. internal parts
are relieved & thus ye. prove antiperiodic by causing relaxation.
But when there is a general inflamatory fever over ye. whole system
ye. delirium & a wild staring look of ye. eyes, we ought by no means
make use of them for they will certainly aggravate ye. disease. Neither
do they answer so well in dry bilious habits & in ye. relaxed & phlegmatic
habit & ye. reason why they are generally more successful in Women & Children
than men, & in ye. latter they scarce ever produce a strangury. It is generally

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looked upon as a very ~~[illegible]~~ harsh practice to blister Children, but they certainly
suffer less ~~[illegible]~~ from them than grown persons, for we find ye people
of a moist & lax habit feel little uneasiness from them. It is a
dangerous practice to apply them in putrid fevers or where there is a
tendency to putrefaction, for it frequently happens ye a mortification comes
on, w.h unless it be stopped soon makes an end of ye patient. In
Malignant fevers there is ~~a~~ greater tendency to putrefaction ye in ye cold,
hence ~~they~~ we should be more sparing of them in warm countries, especi-
ally during ye Summer Season. Baglivi, an Italian
Physitioner ~~was~~ & made some very fine observations on Blisters, takes
particular notice of this, & was very cautious in using them on ye cold
Part where there is a high delirium & ~~of~~ Nervous System very irritable, they
are improper, & ye place where extremely cold supplied by pediluvia. Bellini
has a Treatise on Blisters described ye effects to ye power of encreas-
ing ye circulation of ye blood: if this were true, they would be highly
improper in ye beginning of every fever: but this opinion is not well
founded: Many fevers depend on irritation, & in these Cases Blisters
are so far from encreasing ye Velocity of ye blood, ye they manifestly ~~[illegible]~~
it by taking ~~of~~ ye irritation which it & with ye Author Boerhaave
~~[illegible]~~ never imbraced ye doctrine of Bellini & you will therefore find
him very sparing of ye use of ye remedy, tho he lived in a Country where
people would ~~[illegible]~~ bear them perfectly better than most others. Pringle
also considers Blisters as attenuating ye Serum by entering ye Mass
of blood: this is at present a favourite theory, but in my opinion
ill founded, & I think ye Blisters act chiefly on ye Nervous System.
In all fevers topical inflamation excepted, as ~~[illegible]~~ indeed in a debility
of ye Vita, or this power is remarkably ~~[illegible]~~ encreased. In ye Clatter

ne blisters are undoubtedly always hurtful. In y. former they are always
ful & also in y. decline of every fever if y. spirits & vis vitæ begin
flag. I know ~~no~~ only 2 methods of treating a general fever: either to
diminish or increase y. vital powers. The one is done by ~~bleeding~~
antiphlogistic method: as bleeding, cool air & cooling drinks:
latter is performed by stimulants cordials & antispasmodics: as
ites, Wine, Musk &c — If y. former kind are general inflamatory
ers: of y. latter y. nervous &c — It is a common practice to apply
m to y. head in violent headachs attending fevers; but y. is actually
ys a safe practice for they frequently bring on a subsultus tendinum &
Delirium. But if there is a coma or any signs of it, they are then
st effectual if applied to y. head. ~~or if put on~~ However ~~there~~
must observe y. they more apt to bring on a Strangury when
y are applied to y. head than if put on any other parts of y. body;
pecially if y. head has been newly shaved, & perhaps cut, wd. it not
pentomon case. It is therefore better to shave y. head about 24 hs
n before y. Blister is to be laid on; or if y. cannot be done, put
piece of brown paper or muslin between y. Blister & skin. The
angury brought on by a Blister is relieved by large draughts of
ucilaginous drinks, mucilaginous Glysters & warm fomentations
y. Perineum. But if it comes on before y. Blister has been taken
off & dressed, nothing will cure it except taking off y. Blister immediately
If y. Blister occasions great pain warm poultices or fomentations
ould be applied to y. part, especially in topical inflamations; for
y. pain continues it will increase y. fever. On y. acct. we should
be aware of dressing y. Blister at first wd. anything y. can stimulate
y. part & quicken y. Circulation

Effects

[illegible]

Coffee & Tea.

am not very clear whether these are properly ranked aman under this Class of
Ge but Tea has always been looked upon as a nervous vegs or such a one
strongly affects y. nerves: & it is for this reason that I class it here.
have been great disputes about y. real virtues of these substances; & we might
agine y. y. daily & constant use of them would long since have settled y.
pute & informed us of y. real effects on y. body, but it appears y. it is
very circumstance y. hinders us from coming at y. knowledge; for whenever
substance comes to be universally used, it is difficult to ascertain its
al effects from the supposed other, as every change in y. system whether
be ~~to~~ in health or disease is generally ascribed to it. It is y. same w.
Coffee: A person whose habit is rather too frigid will find advantage from y. warm
; another who is ~~of~~ naturally of a lax habit will find y. encreased; &
perhaps y. effects in either case are owing entirely to y. Water, & not at
all to y. Tea. Besides even granting y. y. Tea possessed some extraordinary
qualities by w. it affected y. nervous system, there would in a short time
become a habit to it & lose y. effects: besides as it is rendered palatable
by Milk & sugar, its effects are in a great measure ~~lost~~ destroyed or at last imperceptible
to us, & every person is in y. case at liberty either to attribute good or bad
qualities according as he thinks he finds himself affected w. it. If they have
any considerable effects, ~~these~~ in y. natural state, these become of a mixed
nature when they are combined w. warm ∇, & many of y. Virtues y.
are ascribed to Tea & Coffee are owing to y. warm ∇. These considerations
make me very doubtful of y. real effects on y. body. They have been said
to assist digestion, relieve y. Stomach when too much loaded w. Aliment &
prudeties & thus take off y. headach y. is often y. consequence of these: for
note y. secretion of urine & encrease y. insensible perspiration: but all these
effects may be accounted for merely from y. action of warm ∇ w. also prevent
us from falling asleep. A continued use of Tea, especially if it be very strong, weakens
~~them~~ y. tone of y. Stomach, & in consequence of y. relaxing y. whole system, induces
tremors & spasmodic affections: these effects are also partly owing to y. warm

but more particularly to ye Tea: for I knew a gentleman whose stomach was very sensible & ~~[illegible]~~ hurt by ye use of Tea; but he ascribed these effects rather to ye warm & ye to ye hay, in order therefore to ascertain this he tried the warm & impregnated wd. other veg: substances & drank it in ye same degree & heat ye he used to take his Tea; but ~~in out ye same effects~~ his stomach was not affected wd. it in ye same manner. He expected ye expt. at least would always wd. ye same event. He at length however by habit cou can take tea & now uses it constantly wout perceiving any inconvenience from it. I must here observe to you ye Tea belongs to an order of plants ye contain an narcotic quality & we may therefore fm botanical analogy judge ye it possesses virtues of those plants to wh. it bears an affinity. These narcotic effects are very evident when ye ~~pt~~ Tea is fresh or newly cured; & hence ye people of China where this plant grows never use it until it has been kept a twelve month, after it is first dried. It is always of ye age by ye time it comes to europe & has lost most of ye narcotic quality it possesses when newly gathered. But even then it sometimes proves emetic. ——— Whatever virtues Coffee may possess in its natural state, these are entirely destroyed by its manner of preparation: for after Coffee is burnt it must be considered as an substance contain an empyreumatic & somewhat acrid oil, upon wh. its effects chiefly depend. This is very evident, for diff. substances treated in a similar manner will acquire almost ye same taste & qualities. It is evidently stimulant in its first operation but afterwards proves sedative in ye same manner as ye other med. of ye class. It is therefore sometimes serviceable in spasms of ye ~~but~~ stomach & intestines, & is especially if drank wout sugar & milk; & accordingly I have known it of service in violent colics, when other remedies were not to be immediately had. But like all other sedatives, a free & continued use of it debilitates & enervates ye system particularly ye stomach & intestines, hence it predisposes to ~~[illegible]~~ a train of hysteric & hypochondriac complaints. I have known instances of ladies who were always affected wd. hysteric symptoms after ~~[illegible]~~ drinking it.

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answers much better to give it in a Glyster, from ~~Zij to Zjj~~ Zjj to Zjs & more in infusion. It is an excellent remedy in every case where ~~[illegible]~~ [illegible] are indicated; but if ye Infusion be too strong it is apt to ~~cause~~ produce Nausea, vomiting, tremors & spasms over ye whole body. This however only happens when it is employed in too great a quantity, for if it is properly exhibited it is useful in many cases. De Haehn has found ye fumes of it ~~as a Glyster~~ committed into ye bowels are very efficacious in ye a strangulated hernia, Colica Pictonum & Ileus; Disease ye are often very difficult to be removed & prove fatally. In these therefore we should always try ye effects of ye remedy: ye only inconvenience attending it is ye it requires a particular apparatus or machine: this however is but very simple, & you will find a description of one in De Haehn. As we see that ye fumes will produce ye same effects on ye system ye Tobacco substance will do, we may conclude ye ye active part may be in a great measure volatilized & dispersed by boiling; & by this means we obtain a much milder medicine. When ye acrimony has been taken off by boiling we may give it w. more confidence internally, & tho it will often even in small doses prove purgative, yet it affords a very good diuretic & pectoral, & answers much better than Opium combined w. Stimulants. The Syrup of Lobeliana is still retained in ye Shops & employed sometimes for old coughs & catarrhs. Some great practitioners are very fond of this medicine in these complaints & have bestowed very high encomiums upon it. It is impossible to ascertain ye dose properly, as this will entirely depend on ye degree of boiling ye infusion has undergone. The Tobacco has also been employed externally, in ye same manner as Cicuta, for resolving scirrhous tumours; & an ointment of it has also been used as a detergent & digestive in ulcers, but I know no Instance of its being ever prescribed for ye cure of a Cancer. If it is applied to fresh Wounds it brings on very disagreable & even dangerous symptoms, & ye should make us very cautious about using it in open & running sores.

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Laurocerasus. This has been found to contain a poison & hence it is now entirely rejected in Medicine. You will see the history & experiments made w.th it in y.e Lond. Philos. Transactions & also in Browne Langrish's treatise on y.e subject, who made his experiments on Brutes. His Experiments seem to shew y.t it might be given in moderate doses; but if given too freely it will destroy y.e person. I must here observe to you y.t we cannot always trust to experiments made on Brutes: some substances prove poisonous to them y.t are very innocent to us & vice versa. Thus for Instance Hemlock is a goodeable food for a Horse; but it is poison to Cows as well as to us. Bitters in general are not only disagreeable to Dogs; but often destroy them; whereas in moderate quantity they are rather agreeable to Man. And therefore if any of you should ever be led to institute experiments on Brutes for discovering y.e virtues of any medicine, you should always endeavour first to learn whether y.e animal is liable to be affected by them in a particular manner.

Laurus. Bay berries. The Leaves, Bark & Berries of this are employed in Medicine. The kernels approach in taste to y.e bitter Almond & Laurocerasus & on y.e account they have been suspected of y.e same qualities. But this is stretching y.e matter too far, & if we were to reject all bitters because they approach to them, we must reject a great many y.t are certainly very innocent. The Leaves of this have been sometimes used with success in external applications for y.e white swelling. Internally the oil of y.e Berries is sometimes used in flatulent Cholics: However this substance is not much used by y.e physicians, & y.e Barries has almost exploded it entirely.

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As it has been for wise purposes ordained that Women is almost y. only creature in y. animal creation, that has at certain & stated times an evacuation from y. Vagina which when it is either in too small or too large a quantity lays y. foundation for many diseases: it will perhaps not be amiss in this place to explain y. nature cause & other peculiarities of this evacuation; especially as it is so immediately connected with our subject; & must be impossible to judge of y. proper method of restoring this discharge, unless we ~~have~~ are acquainted with y. principles on which it depends —

There have indeed innumerable treatises been composed on this subject, & it has afforded matter for disputes from y. earliest ~~to~~ ages in history down to this day, tho few have hitherto been able to assign satisfactory reasons

This Evacuation is called flowers menstruus, menses, menstrua, catamenia; & because it generally returns once in a month, sometimes however y. Intervals are longer & other times shorter —

The ultimate cause or end of this evacuation have a nourishment for y. foetus ~~during~~ when a pregnant: of this indeed no body now

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Authors differ widely about ye efficient or proximate cause of this evacuation: some have attributed it to ye influence celestial bodies particularly ye Moon have on ye human frame: others have looked for ye cause in a particular fermentation of ye humours: others imagine it is owing to a general plethora of ye body, whilst others think ye plethora partial or confined to a certain ~~place~~ part of ye body only: some again there are who placing cause in a particular structure or conformation of ye Uterus. The opinion of ~~them~~ a few who place it in a venereal sympathy does not deserve even a serious attention. It will however be necessary to take notice of ye other opinions, ye we may be able to judge ~~which~~ of adopt ye one of them wch appears most rational & probable.

First then Experience teaches us that ye return of ye Menses is not exactly monthly, in some they return every 20th day in others every 30th & this alone is sufficient to overset ye theory of those who account for ye periodical return from ye influence ye moon has on ye body. Moreover if this owing to any lunar power all Women must have ye Menses at or about ye same time of ye Moon, wch is far from being ye case.

Nor has ye opinion of those a greater degree of probability who say the cause is owing to a certain ferment in ye blood, wch fluid

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putg this in motion or changes it into its own nature, & thus
in ye same manner, as other fermenting Liquors, the the
blood say they throws off a Scum or flowers, &c. is evacuated.
How does it happen that ye ferment lays dormant or hid
for near 14 years, ye it neither exerts any effects, nor is
it in ye least disturbed by ye other humours & evacuated out
of ye body? further, why is ye fermentation excited only at
certain & stated times: And lastly how does it happen ye ye blood
does not undergo ye least change? for fermentation in other
things always ~~brings~~ changes ye quality of ye substance ferment-
ed; whereas in this case, if it is to be called a fermentation,
ye portion of ye blood &c. is thrown out of ye body does not
differ in any degree or circumstance from ye other blood. It
can not therefore be properly lodged in a ferment: ye opinion
indeed appears so extravagant that it should not have taken
any notice of it unless it had been supported by Men of
ye first eminence in Anatomy & Medicine for instance
Mauriceau, Verheyen, Lamotte & others; it is indeed strange
ye Men of such Learning & judgment in these cases should
have adopted & endeavour to establish so futile & absurd a theory.
With regard to Astruc's opinion ye ye discharge is owing to ye
peculiar structure of ye Uterus I shall observe no further upon it,
than that it has hitherto not been demonstrated by dissections or
physiological observations —— We shall next enquire into

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the opinion of those who account for it from a general plethora.
This is y. theory w.h most of y. Antients hold & among y. Moderns
it has been supported by Friend, Boerhave, Haller & many others of
y. first reputation, who have all followed Galenus in this. —
The arguments in favour of it are chiefly these:
That ~~Nature~~ it was necessary, as y. foetus was to be nourished w.h
y. Womb, ~~it~~ to provide y. body with a power of making more
blood than was requisite for y. encrease & nourishment of y.
frame, & that hence Women abound in general w.h a greater
quantity of blood than Men. This they explain by y. following
reasoning. — That Women have a more lax & weak habit
of body, y. of consequence the Impetus in y. arterial system
is not so strong as in Men, whence the blood does not move w.h
equal velocity, & they are moreover given in general to sedentary
life; for w.h reason y. blood is more accumulated within y.
body, y. secretions are not ~~in such quan~~ so copious & a plethora
is by this means produced, w.h is the cause of y. Menses —
This reasoning will be found fallacious when we consider
y. following arguments y. are brought against it —
There are many Women ~~wt~~ of a stronger habit of body than
Men & who are inured to hard labour from y. Infancy;
~~then the~~ e.g. Country Girls; these therefore should be less subject
to a plethora; but we find that y. return of the Menses is
periodical in these & y. evacuation generally more copious than
in y. more delicate & less exercised females —

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In most Women y. Menses come on a Year or two before y. body arrives at its full ~~growth~~ size, & therefore before this general plethora can possibly have taken place; & this ~~generally~~ happens more particularly in such Girls, when if we can judge from appearances, a plethoric habit is by no means y. cause — if a plethora be a superabundance of blood. The quantity of blood in a healthy y. body is estimated to be at least 25—28 ; it is scarce possible y. y. loss of 6—8 ounces of blood taken away very gradually can have any considerable effect in lessening y. plethora, & y. y. retention of it can be productive of such consequences as are say'd observed from a suppression of y. Menses — But a general plethora being y. cause of y. Menses is further contradicted by y. following facts. If a Woman is during y. Intervals of y. Menses labouring under a disease y. not only wastes y. body but also prevents it from being nourished, we shall nevertheless find y. y. Menses will return at y. usual period. — Those Women who have lost an Arm or Leg & in consequence of y. become more plethoric, do not evacuate a larger quantity of blood at y. stated times than usual: were y. discharge owing to y. plethora, it must be considerably increased — We also find y. notwithstanding a Woman has been labouring under a diarrhoea, haemorrhage

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or lost a considerable quantity of blood by venaesection, she will still have her usual discharge by ye Vagina. Nay it is some times necessary to take of ye spasmodic contraction & tension in ye Vessels of ye Uterus by bleeding in order to promote ye flow of ye Menses. If a plethora were ye occasion of them, bleeding must effectually prevent their coming, especially when it is ordered at ye time of ye menstrual period; but as the contrary is found to be ye case, we cannot possibly admit ye cause to be removed & yet ye effect to be produced.

As it then seems at least improbable ye any of ye former opinions are just, we shall next endeavour to give one ye will account for ye various phenomena: The Menses then I say arise from a plethora in ye Vessels of ye Uterus, & ye plethora is owing to ye peculiar habit of Women & to ye situation & structure of ye Uterus. The Nature of Woman is such, ye she must nourish ye foetus in ye Womb w. her own blood & fluids: & therefore she is endowed w. a power of sanguification, more than is sufficient for ye diff. functions of ye body & to restore wastes. As ye foetus is to be nourished in ye Womb, it is necessary ye a certain portion of ye blood fm ye Mother be conveyed directly to it; ye is no way more direct than by ye mouths of ye Vessels, from w. there is a discharge whenever they are dilated beyond their natural size.

Before a Woman
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Before a Woman is fit for childbearing it is necessary y. this accumulation of blood should take place in y. Uterus: & as this would be attended w. greatest inconveniencies when a Woman is not pregnant, it is wisely ordered y. y. mouths of y. Vessels open, whenever they are distended w. blood, w. then issues out through y. Vagina; by w. also y. Vessels obtain a greater degree of capacity & are more easily ruptured when necessity requires — During Infancy & childhood these Vessels are so extremely small that they do not admit red blood, & are then filled w. a milky fluid — The situation & fabric of y. Uterus also much favour this derivation & accumulation of blood. It is situated in a spacious pelvis, & not pressed. ~~It is situated~~ It is extremely soft, lax, ~~readily to be~~ easily distended, almost entirely composed of blood vessels, of w. y. Arteries are considerably larger than y. Veins w. also have no Valves: hence the Muscles employed in respiration have no considerable force on them: for w. reason y. blood is not so readily returned by y. Veins as it enters by y. arteries: a necessary consequence that it is accumulated & at length evacuated by y. Vagina. This happens in y. following manner — About y. 14th or 15th year y. blood begins to issue out in a very small quantity through y. Mouths of y. Arteries: this happens earlier in warm Climates, in colder Climates later. The reason is obvious. It is owing to y. diff. degrees of rigidity & capacity of y. body.

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same nature: All th
ye nervous system, &c.

The blood continues issuing out slowly for 2 or 3 days; after wh. ye elastic
Vessels, being freed from ye load, contract by degrees, & do not
again discharge themselves untill they are distended anew
by ye blood; this generally happens in two or 3 months
from ye first evacuation when matters go on in ye same manner
The succeeding periods are quicker: The Vessels are then become
more lax & easier distended: The discharge is more copious, un-
till ye Vessels, after having suffered ye utmost distension they
are capable of undergoing whilst the uterus is in ~~a~~ its
impregnated or virgin state, naturally empty themselves every
28th or 30th day more or less; but generally observing a regular
period & also evacuating nearly ye same quantity of blood each
time viz: from 4 to 6 & 8 ounces — The reason of its
periodical return can only be accounted from custom
Custom affects & wonderfully directs all ye actions of our body
but particularly ye various excretions: hence a person who
has accustomed himself to be bled at a certain season of ye
year; tho he use spare diet, watching, purgatives & other methods
to reduce ye body, will still have ye symptoms of plethora
at ye time he usually ~~lost~~ lost blood: on ye same principle
we may accustom ourselves to go to stool & make urine
at fixed times only. The same holds good of hunger, sleeping
& waking. The periodical movements in many diseases are of
ye same nature: All these can only be explained from ye laws of
ye nervous system, wh. if our time will permit, shall be ye subject

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ject of a future lecture, as it is a matter of no trifling impor-
tance &c. If a suppression of ye Menses we give ye medi-
at ye period they are naturally to come on, we shall be much
more successful than if we order them at any other time.
Here then we shall rest this matter: & if we consider ye
Vessels of ye Uterus must be first distended w. blood before
ye discharge can take place: & yet ye blood, w. issues out at the
times, were to be dispersed over ye whole system, it could by
no means have ye power of distending ye body: may we not
conclude ye immediate sufficient cause of ye Menses is a distension
of ye uterine Vessels from ye blood ~~lodged~~ accumulated in them,
tho no plethora of ye system ~~is~~ takes place ~~If this is~~
~~not always~~ We judge of ye approach of ye Menses in a Girl
who has never had them & is arrived at ye 14th or 15th year of her
age by ye following symptoms. — The Breasts swell; they percei-
ve a weight & obtuse pain about ye ~~lum~~ pubes & lumbar region;
ye legs also swell; ~~&~~ loss of appetite, aversion to motion & paleness
these symptoms generally attend during ye first 2 or 3 Menstruations,
after ye they become easier & by degrees vanish entirely, so ye ye
period afterwards return without any manifest Inconvenien-
Matters then continue in this train, w. out any manifest
alterations to ye 40th or 45th year of ye Woman's age, w. is
critical year to Women, & during all this time they are
in general freer from diseases than ye Men

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But about this time, when ye. animal functions begin to be impaired in both sexes, ye. Menses do not only not return at ye. stated periods, but also differ in the manner of coming on, & at length as they advance in years, cease entirely, wh. generally happens in ye. 50th. year. For by this time ye. Nerves lose somewhat of their irritability, ye. rigidity of ye. solids increases, ye. blood vessels are less elastic & ye. circulation is more languid; hence ye. uterine vessels are not so easily distended, & they by degrees again contract & recover ye. in a manner the state they were in before ye. catamenia began to flow — This however happens not at once or in one year; but ~~due~~ successively & during several years, by which means ye. disadvantages & inconveniences are in a great measure avoided that would otherwise come on from ye. sudden suppression of so considerable an evacuation. And indeed it ~~com~~ pretty does happen ye. ye. body suffers many inconveniences from it, which are generally heavier or lighter according as ye. Menses go off ~~ye~~ suddenly or by degrees — sometimes a hæmorrhage, Dysentery, bloody urine, inflammations, scirrhus & many other disorders are ye. consequence, for ye. blood wh. was usually accumulated in ye. uterus is now determined to diff. places & must force through diff. channels. This however is by no means owing to a general plethora, but entirely to ye. fluids being determined to diff. parts & to a change of balance in ye. system: The same symptoms pretty

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occur from ye suppression of preternatural evacuations ye have continued for a considerable time & when there is not ye least suspicion of their being owing to plethora. *

In my last Lecture I treated of ye proximate Cause of ye Menses & ye symptoms wch indicate their coming on. — I shall now treat of ye disease. — These may be divided under 3 heads —
1. When they do not come on at ye proper time of age,
2. When their course is suppressed. —
3. When they are too copious & are then denominated a Menorrhagia.

When a Girl has arrived at her 14th or 15th year & ye Menses do not come on, all ye symptoms wch I said indicate ye approach, are aggravated, other evils crowd upon her & she soon begins to labour under a Chlorosis — She becomes weak & languid, unfit for motion or exercise, & drowsy & wch continual yawning & stretching; she has sour belchings, & frequently is affected wch a vomiting of acid & viscid slime; ye paleness increases; her breathing becomes difficult & laborious, & she has a continual desire for chalk, ashes or things of a nature fit to absorb ye acid in ye stomach. The cause of ye disease is undoubtedly at first to be sought for in some fault of ye uterus, by wch ye natural evacuation is prevented from making its appearance at ye proper time, by wch ye whole system is thrown into disorder & a total debility & relaxation of ye habit follows. Our Indication of cure therefore is to strengthen or rather encrease ye relaxed tone of ye solids, & by ye means enable nature to effect her purpose & bring on ye salutary discharge

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Caution however is necessary in ye manner of doing this. ~~Nature~~
There are as fixed principles in our body by wch nature constantly
operates, directs & moderates her efforts, as there are in all her
other actions; we must therefore endeavour to lead but not to
drive; when we intend to bring on this discharge we must
be extremely attentive in what manner we do it & as
stimulants are indicated, cautious in ye choice of them;
for if ~~in this~~ they were to be given indiscriminately in ye cachectic
& vitiated state of ye body, we might as soon bring on an
hemorrhage from ye lungs or any of ye other viscera as from
ye Uterus; especially as stimulants always encrease ye impetus
or circulation of ye blood, wch must be more considerable in
ye parts near ye heart & at ye same time expand to prepare
readily occasioning a rupture, than in those at a distance from
ye heart & ~~not~~ free from pressure of all kind as ye Uterus is.
The following method I would recommend to you in these cases
Let ye person, if her circumstances permit it, reside in ye country
& take exercise by riding on horseback or other bodily motion;
order in ye beginning some testaceous powders & small but
repeated doses of rhabarb, with an intention not only of correcting
ye acidity in ye stomach & thus strengthening ye organs, but to
remove any obstructions that may have taken place in ye
abdominal viscera; let her Diet be of an animal nature
as much as possible: by this the tone of ye stomach &
viscera will be in some measure restored, digestion will be
regularly performed, & I need not now tell you how much all ye functions
of ye body depend on a due ~~performance~~ state of ye chylopoetic viscera

When we have to deal
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When we have obtained this we may then employ ye stronger tonic meds: with safety & reputation. The peruvian bark & ye various preparations of steel, ~~but~~ above all either natural or artificial mineral waters are then to be given & lastly ye cold bath may finish ye course. We thus by degrees increase ye tone of ye solids, ~~& consequently~~ ye blood vessels are strengthened, yr action becomes stronger & Nature will then do ye rest for us by ye spontaneous eruption of ye Menses.

We call it a Suppression of ye Menses when this discharge is entirely stopped & for a considerable time. — It is easily distinguished from all other complaints: For tho there is at first some similarity of symptoms between a suppression of ye Menses & those ye 1st occur in ye first months of pregnancy yet we distinguish them by observing ye 1st ye Breasts do not swell & grow hard when ye Menses are suppressed; ye 2d symptoms are all aggravated at ye period when ye Menses should return, & after that decrease again; & tho this also happens in a pregnant woman, yet it lasts only for ye 3 first months of her pregnancy.

The remote or occasional causes of a suppression of ye Menses are various & manifold: e.g. Violent passions of ye mind: as Anger, Terror, Grief, Joy &c — Moist air; too free a use of acids, astringent meds: but ye most common is sudden cold, particularly of ye extremities; therefore walking barefooted & especially standing or walking in cold water, during ye time of Menstruation

The diff. proximate Causes mentioned by Author may all be reduced under these 4 heads —

1. Lentor & Viscidity of y. Blood —
2. Plethora —
3. Laxity & debility of y. whole System or Uterus only —
4. Spasmodic constriction of y. Vessels of y. Uterus —

With regard to y. first I shall only at present observe y. untill it is demonstrated beyond all manner of doubt y. y. Lentor & Viscidity really takes place in y. human body it ought not to be admitted as a Cause of any Disease whatever. I have endeavoured both from theory & experience to show y. it can never be y. cause of disease, & y. if it ever does take place it is an effect & not a cause owing entirely to y. state of y. Solids.

With regard to y. second Cause of a suppression being owing to plethora, I do not see how a plethora in itself can occasion it, tho it may bring on a spasmodic constriction of y. Vessels of y. Uterus, in wh. case it comes under y. 4th head of proxe. Causes.

3. Laxity & debility of y. ~~whole~~ System in general & of y. Uterus in particular may justly be ranked ~~among~~ one of y. proximate Causes of a suppression of y. Menses. When Laxity prevails ~~the~~ it is in general accompanied with a languid circulation. The heart does not throw y. blood out w. y. force wh. is necessary to drive it to y. ultimate branches of y. Arteries. The Arteries themselves have lost part of y. contractility & elasticity. no wonder then that an obstruction & suppression takes place in y. Uterus.

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The 4th. & perhaps most common cause of a suppression of ye. Menses is a spasmodic constriction of ye. Vessels of ye. Uterus. It is then chiefly if not solely on ye. two latter causes ye. an obstruction of ye. Menses is owing, ye. cure must be directed according to them: In ye. one case we must endeavour to solve ye. spasm: In ye. other to strengthen ye. solids & thus encrease ye. circulation or impetus of ye. blood. —

The former we obtain by bleeding, pediluvia & all ye. tribe of medicines called antispasmodics.

Bloodletting by ~~diminishing~~ weakening ye. nervous power & impetus of ye. blood, greatly solves ye. spasm — We also obtain another advantage by bleeding; for we by ye. means diminish ye. quantity of blood, & if it should happen ye. ye. Menses do not come on, it will still prevent any bad effects ye. might happen from a determination of ye. blood to other Viscera, & gives us an opportunity of taking such steps as will be soon bring ye. evacuation into its proper channel —

By washing & immersing ye. feet in warm Water we may also contribute greatly to excite ye. evacuation: For in ye. 1st. place by taking off ye. tension & thus causing a derivation or revulsion to ye. lower extremities —

2. By keeping ye. feet in a considerable time it becomes a powerful stimulant & to ye. singular advantage ye. whilst it relaxes ye. parts near ye. Uterus it excites ye. action of ye. heart & arteries, by wh. ye. blood is now powerfully determined to those parts — But

3. The greatest virtues of warm bathing are ye. it is very agreeable to ye. nervous system, ~~reducing the lefs~~ takes off irritations, eases pain & thus proves a very powerful antispasmodic —

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And it is chiefly owing to its antispasmodic virtue y. it is pretty
useful in cases of this kind. It is however safer to take away a
little blood before we order it, for unless we do this, it may by its
stimulating effects cause y. rupture of vessel in y. Lungs or brain.
This this might be guarded against by leaving y. feet in warm water
for 10 minutes or untill y. stimulant effects begin to take place.
Warm fomentations to y. Spine may also be of considerable service — Other antispasmodic remedies may also
be given at y. time; the chief of them is Opium, & I have
often known a good dose of Laudanum bring on y. Menses
after many things had been tried to no purpose —
She must also be temperate in her diet, & use only such food
as is of easy digestion. She ought by all means guard kindly
from taking cold —
When y. Suppression is owing to debility there must be a different
method of cure prescribed, — & such meds. given as will strengthen
then y. tone of y. solids & increase y. impetus of y. fluids —
Emetics may be also given for this purpose; but cathartics are
more immediately useful, for by irritating y. rectum, y. is communicated to y. Uterus: of this kind are calomel, rhubarb, but above
all perhaps aloes, as. has a peculiar property to irritate y. rectum
In this case asa fetida, Galbanum, Myrrh, Castor & volatile salts
may likewise be given —
Bitters, carbonated Mustard, y. peruvian bark as. y. various preparations
of steel, are also of great service in y. case —
It is also in y. obstruction of y. Menses from y. cause of debility
y. Electricity has frequently been found useful, & there are many instances

Wilhelm Gottlieb

of Electricity bringing on ye discharge almost instantaneously.
by tying or bandaging or otherwise compressing ye femoral arteries ye blood
is so more powerfully determined to ye internal Viscera, & you
have instances of it in ye Rds Med: essays of ye success of ye practice.
Exercise is extremely necessary in ye case, particularly riding
in ye open & clear air, by wch ye abdominal viscera are
all shaken — Mineral waters are also extremely proper.
The diet in ye case should be of ye nourishing kind, & animal
food is very necessary. — Wine must also be ordered in mode-
rate quantities; it is an agreeable stimulant to ye stomach,
quickens ye action of ye nervous power, quickens all ye actions of ye
body & keeps ye mind cheerful & free from uneasy sensations.
Whenever ye cold bath can be applied in safety, it will be of very great
service; for it strengthens ye solids & whole system —
When ye Menses at ye proper time & age of ye Woman go off by degrees
we are to submit to ye Laws of ye system & not attempt
any thing, as there is no danger of bad consequences. But when
they go off suddenly & in a manner at once, ye evils wch Pleuresy
stated in my last letter, generally follow. Nor is there any thing
strange in ye; for all sudden & violent changes ye happen in our
body are never without danger. —
We have still another diseased state of ye Menses to consider
that is when they are too copious. We call it a Hæ-
morrhage of ye Uterus or a too copious a discharge of ye Menses
when the quantity of blood evacuated is too considerable & reduces

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or weakens y. patient. Also when y. periods return more freq.
than is usual ——— The proximate causes are ———
1. A plethoric state of y. body
2. A Laxity of y. Uterine Vessels
3. An Irritation in y. Uterus ———
That a plethora may be y. cause of a Hemorrhage from y. Uterus
is not to be doubted. For when y. quantity & impetus of y. blood
is encreased it is naturally determined w. greater velocity & force
to y. Uterus, as well as to y. other parts of y. System. The
predisposing & remote causes of y. state of y. body are an indolent
life; suppression or obstruction of y. natural evacuations; high
living &c ——— We discover when a plethora is y. cause
of y. hemorrhage: The pulse is strong & full; y. Woman breathes
w. difficulty, because y. blood has not a free circulation through
y. Lungs: The Veins are turgid & distended &c ———
2. Laxity of y. Vessels in y. Uterus may be y. cause of a hemor-
rhage because a little or no resistance is made to y. blood
w. easily bursts y. Vessels & discharges itself. The remote causes of
this are: difficult Labours: the warm bathing particularly freq. pre-
valent, indolent life & spare diet; & y. most pernicious custom of
sitting stoves to y. feet in Cold weather ——— We know debili-
tating laxity to be y. cause of y. hemorrhage from y. paleness of y. coun-
tenance, aversion to motion, want of appetite, painful distension of y. abdomen,
edematous swelling of y. Ankles & Legs, a cachectic habit of body w. y.
other pain of symptoms y. generally accompany a relaxed state of y. System.

3. An irritation in ye. Uterus may also cause a hemorrhage from ye. Organ. For ye occasion a stronger oscillation of ye. Vessels in ye. Uterus, by wh. a larger quantity of blood is determined to ye. part. The ~~cause~~ irritation may be of two kinds: it is either owing to too great an irritability in the Vessels aggravated by prejudicial causes, as too free use of stimulating meds. or ye. cause may be lodged in some thing ye. is immediately applied to them & causes irritation as ye. Venereal virus. The symptoms in these cases are pain about ye. pubes & lumbar regions; headach, Vomiting, sometimes of blood, cough & difficulty of breathing; sometimes a tenseness & hardness; & freq. but irregular pulse; flushings of ye. face w. a hectic fever.

A hemorrhage of ye. Uterus also comes on from pieces of ye. placenta being left in ye. Womb after birth; from clots of blood being lodged there, from inflammation of ye. Uterus & many other disorders of ye. Uterus; but as these cannot be ranked under an enumeration of ye. Menses, I omit taking further notice of them here. With regard to ye. cure, it is evident ye. we must pay ye. greatest attention to ye. cause.

If ye. discharge is owing to a plethora ye. quantity of blood must be diminished. For ye. purpose we order large bleeding & gentle cathartics; spare diet & rest.

If it is owing to a relaxation of ye. Vessels in ye. Uterus astringents are indicated. At first ye. gentler ones such as R. of roses & ye. bark, ~~the~~ Alum Whey, Elixir of Vitriol, Terra Japonica & alength Alum in substance. We may also apply linnens ye. have been dipped into cold Water & or Vinegar to ye. pubes & abdomen. If these are found insufficient we must inject into ye. Vagina & Uterus at first only cold Water perhaps, then astringents as Alum Whey or a decoction of ye. oakbark.

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diet must be
Flesh broths, Saleb
or Drink she
abus in Belief
then y. disease
astringents, for
then it is in Tabe

Her diet must be nourishing, but of easy digestion: her drink
plain water or an infusion of roses — She must use
moderate exercise & after some time have recourse to ye cold bath.
If ye discharge is owing to an irritation in ye Vessels of ye Uterus,
we must either remove ye irritating cause, or render ye Vessels
less irritable & susceptible of impressions —
If it be owing to coagulated blood & or pieces of ye placenta being
lodged in ye Uterus we must by all means extract or evacuate them,
& then give an opiate to quiet ye irritation —
If it be owing to ye venereal virus or an arthritic irritation; if
to Inflammation, scirrhus or a polypus in ye Uterus; we must
cure ye various diseases, before we can attempt to check ye evacuation.
If it be owing to an increased irritability in ye Vessels, nothing
is equal to Opium to take off ye present evil. This must be given freely.
Clysters are also of great service in this case; particularly a Clyster
of starch & opium; for this mitigates ye spasms occasioned by
ye irritation & at ye same time gently astringes — By applying
irritating substances to the parts of ye body, particularly the feet
& at ye same time an antispasmodic, we may also give relief
to our patient. A blister therefore applied between ye shoulders
or to ye legs seldom fails of relieving ye disorder —
The diet must be bland, & mild & at ye same time nourishing,
Flesh broths, Salep, Sago & other farinaceous substances.
For drink she ought take an infusion of Linseed & Marshmallows,
or what is perhaps superior to them ye emulsion of ye gum arabic.
When ye disease is removed for ye present its return must be prevented
by astringents, for these by increasing ye tone of ye Vessels render
them less irritable. For this purpose ye bark & various spa-

Total amount of
Receipts on Hand
[illegible] & profit

Steel answer strongly ~~fa~~ well, but particularly mineral Waters.
lies in on Horseback, a nourishing Diet & Cold bathing will afterwards
fect a perfect Cure